Metal Analyses from Water Samples Collected Near Britannia Mine and in Howe Sound, British Columbia, 1997 and 1998

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METAL ANALYSES FROM WATER SAMPLES COLLECTED NEAR BRITANNIA MINE AND IN HOWE SOUND, BRITISH COLUMBIA, 1997 AND 1998

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ABSTRACT

Piercey, G.E., C.D. Levings, and J.A. Grout. 2001. Metal analyses from water samples collected near Britannia Mine and in Howe Sound, British Columbia, 1997 and 1998. Can. Data Rep. Fish. Aquat. Sci. 1082: 39 pp.

Data are presented on the results of dissolved metals analyses from a sampling program on Howe Sound to assess dispersion of acid mine drainage and copper from the abandoned Britannia Mine. Sampling was conducted during 1997 and 1998; complementing biological surveys of juvenile salmonids, fish food organisms, and transplant experiments with mussels and salmon smolts. Results of dissolved metals analyses at 63 sites on Howe Sound during the period April to August 1997, January 1988, and March to June 1998 are included. Beach seine (24 sites), amphipod basket (14 sites), fish cage (2 sites), mussel cage (15 sites), amphipod bioassay (2 sites), and chironomid bioassay (6 sites) components are included. Samples were analysed by ICP-AES (inductively coupled argon plasma atomic emission spectrometry), and in selected instances, by GF-AAS (graphic furnace atomic absorption spectrometry) for copper.

RÉSUMÉ

Piercey, G.E., C.D. Levings, and J.A. Grout. 2001. Metal analyses from water samples collected near Britannia Mine and in Howe Sound, British Columbia, 1997 and 1998. Can. Data Rep. Fish. Aquat. Sci. 1082: 39 pp.

Cet article présente les résultats d'analyses des métaux dissous effectuées sur des échantillons prélevés dans la baie Howe dans le cadre d'un programme destiné à évaluer la dispersion du drainage minier acide et la présence de cuivre provenant de la mine abandonnée Britannia. Des échantillons ont été prélevés en 1997 et en 1998. De plus, des analyses biologiques ont été faites sur de jeunes salmonidés et des organismes dont se nourrissent les poissons, et des essais de transplantation de moules et de saumoneaux ont été effectués. Les résultats des analyses des échantillons prélevés d'avril à août 1997, en janvier 1988 et de mars à juin 1998 dans 63 sites de la baie Howe sont inclus. Les données sur les échantillons prélevés au moyen de sennes de plage (24 sites), de paniers à amphipode (14 sites), de cages à poisson (2 sites) et de cages à moules (15 sites), ainsi que les données des essais biologiques effectués sur des amphipodes (2 sites) et des chironomes (6 sites) sont présentées. Les échantillons ont été analysés par spectroscopie d'émission en plasma d'argon induit par haute fréquence (ICP-AES) et, dans certains cas pour la détection du cuivre, par spectrométrie d'absorption atomique en four graphite (GF-AAS).

INTRODUCTION

The Britannia copper mine has been discharging acid mine drainage (AMD) into Howe Sound, British Columbia, since its closure in 1974. AMD contains high concentrations of dissolved metals that have the potential to impact the flora and fauna near Britannia Beach and elsewhere in Howe Sound. This report contains data on dissolved metals in near-shore surface waters, interstitial substrate water from beaches at several sites in Howe Sound, and total metals from sediments at selected sites. The data contained in this report complement biological data collected in other studies (e.g., Grout et al. 1998, Coombs 1998).

Results of dissolved metals analyses at 63 sites on Howe Sound during the period April to August 1997, January 1988, and March to June 1998 are included. Beach seine (24 sites), amphipod basket (14 sites), fish cage (2 sites), mussel cage (15 sites), amphipod bioassay (2 sites), and chironomid bioassay (6 sites) components are included.

Data are presented in Tables 2, 3, 4, and 5 for dissolved metals at the beach seine sites for 1997, Table 6 for 1998 beach seine sites, Tables 7 and 8 for amphipod basket and fish cage sites respectively, Tables 9 and 10 for mussel cage sites, Table 11 for sites where sediment was collected for chironomid (*Chironomus tentans*) bioassays, and Tables 12 and 13 for sites where sediment was collected for amphipod (*Eohaustorius washingtonianus*) bioassays.

The complete data set for inductively coupled argon plasma atomic emission spectrometry (ICP-AES) (Tables 2, 3, 8, 9, 11, 12, and 13), including detection limits (Appendix 1) is included on diskette at the back of this report.

MATERIALS AND METHODS

COLLECTION DATES AND SITES

Precise site locations (UTM co-ordinates, latitudes and longitudes) for sites in both years are given in Table 1 and shown in Figure 1. A Trimble Pathfinder Basic Plus with post-processed differential correction of a minimum of 180 co-ordinates at each location was used to determine precise site co-ordinates.

Sites where sediments were collected for chironomid bioassays were not geo-referenced. Britannia Creek was sampled near the foot bridge (BCr3) (100 m above the creek mouth), near the subdivision bridge (BCr2) (700 m above the mouth), and in the scrubbers[1] (BCr1). Furry Creek was sampled in similar locations relative to the estuary: FCr3 approximately 100 m upstream of the estuary, FCr2 (250 m above the

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[1] Sediment was collected from concrete troughs ("scrubbers") about 15 m off-channel near BCr2. For a number of years, water from the 4100 foot adduct (see Grout et al. 1998, 1999) flowed through the scrubbers for an ion exchange process (copper to tin). There is still some leakage into the troughs; the water enters Howe Sound via the 4100 foot outfall.

mouth) downstream of the railway bridge, and FCr1 (450 m above the mouth) downstream of the Highway 99 bridge.

Sites where sediments were collected for amphipod bioassays were also not geo-referenced. Britannia Creek was sampled near the Highway 99 bridge (BCr4) (in the creek mouth), and control sediment was obtained from BB5, one of the beach seine sites.

1997

In 1997, surface water and interstitial substrate water was sampled on an approximately bi-weekly basis from 21 April 1997 to 14 August 1997 at a total of 23 beach seine sites in Howe Sound (Figure 1). Three samples were collected at each site, for a total of 318 surface water and 272 interstitial substrate water samples. Sampling was discontinued at twelve sites around Woodfibre (WF), Shannon Creek (SC), and Defence Islands (DI) after 26 May, 23 May, and 6 June 1997, respectively. Amphipod bioassay sites (2 sites) were sampled in June 1997.

1998

In 1998, surface water was sampled at the Furry Creek (FC) and Britannia Beach (BB) beach seine sites (nine sites in total) on five occasions between 2 April 1998 and 14 May 1998. One replicate was taken from each site, for a total of 35 samples (Figure 1a). Amphipod basket trap sites (Figure 1b) were sampled on 23 March 1997; one replicate from each site was taken, for a total of 14 samples. Fish cage sites (Figure 1d) were sampled twice, on 13 and 20 May 1998; one replicate was collected at each site, for a total of four samples. Mussel cage sites (Figure 1c) were sampled on four occasions between 29 April 1998 and 8 June 1998, for a total of 60 samples. Replicate samples were obtained at selected sites. Chironomid sediment bioassay sites were sampled once, on 5 January 1998.

SAMPLE COLLECTION METHODOLOGY

Surface Water

At each site samples of surface water were collected for dissolved metal analyses in the following manner. A 100-ml disposable syringe was used to sample water at approximately seven cm below the surface. Water was then filtered through a 0.45-µm sodium acetate Sartorius filter in a housing. A total of 200 ml was collected for each sample into a 250-ml acid washed polyethylene bottle. Each sample was immediately preserved with one ml of analytical grade concentrated nitric acid. Samples were held at ambient temperature until analysed.

At the beach seine sites, water was sampled after wading off the beach to a depth of approximately 0.5 m. At the amphipod basket trap sites, water was sampled at the location of the anchor point of the middle of the three replicates. At the fish cage and mussel cage sites, water was sampled immediately adjacent to the cage.

All apparatus, except the previously washed sample bottle, were rinsed with de-ionized water, and then with water from the sample location prior to each sample to avoid cross-contamination. In addition, samples of de-ionized water that were passed through the syringe, filter, and filter housing apparatus as well as nitric acid, were periodically submitted for chemical analyses to ensure quality assurance/quality control in the field.

Interstitial Substrate Water

Samples of interstitial substrate water were collected for dissolved metal analyses in the following manner. Upon arrival at the site, a hole was dug in the beach substrate within 0.5 m of the water's edge with a metal shovel. Sub-surface water was allowed to seep into this hole, at which point samples were collected and preserved as outlined above.

Chironomid Bioassay

Three sites at each of Britannia and Furry Creeks were sampled on 5 January 1998 in the following manner. A composite sample of 500 ml of sediment was collected for chemical analyses by combining a minimum of 5 replicate grabs using a plastic scoop, placed in glass jars with teflon-lined lids, transported to the laboratory, and stored at 4°C until testing. Field equipment was acid-washed between sites, cross contamination swipe taken, and a field duplicate was obtained.

Amphipod Bioassay

One site at each of Britannia Creek (BCr4, approximately 50 m above the creek mouth) and the beach seine site BB5 were sampled in triplicate on 11 June 1997. A sample of approximately 2 liters of sediment was collected for chemical analyses using a metal shovel, placed in pre-washed plastic pails, sealed, transported to the laboratory, and stored at 4°C until testing. Field equipment was washed between sites.

METAL ANALYSES

Metal analyses were conducted by Environment Canada, Pacific Environmental Science Centre, North Vancouver, B.C. In 1997, surface and interstitial water samples collected at the various beach seine sites were first analysed by ICP-AES (inductively coupled argon plasma atomic emission spectrometry), and then, to improve resolution, were re-analysed for copper by GF-AAS (graphite furnace atomic absorption spectrometry). In 1998 all samples from the beach seine sites were analysed for copper by GF-AAS only. Water samples from the fish cage sites were analysed by both ICP-AES and GF-AAS. All samples from the mussel cage sites were analysed by ICP-AES and selected sites were also analysed for copper by GF-AAS. Interstitial water and sediment from samples taken for the amphipod bioassays were analysed by ICP-AES. Sediment samples for the amphipod bioassays were analysed for SFR (sediment fixed residue) and SVR (sediment volatile residue).

Chemical analyses for the chironomid sediment bioassay were conducted by ASL (Analytical Service Laboratories Ltd.), Vancouver, B.C. Methods are outlined in Coombs 1998.

Inductively Coupled Argon Plasma Atomic Emission Spectrometry (ICP-AES)

Simultaneous multi-element analysis was performed by the ICP-AES method in which the sample was converted to an aerosol, desolvated, and dissociated into individual atoms and ions. These were then excited to emit light at characteristic wavelengths, which were then quantified by spectrophotometer (Environment Canada 1998).

Matrix interference, caused by high concentrations of salts in the marine and estuarine water samples, necessitated dilution of the samples, with the result that the element of particular interest, copper, fell below detection limits in most instances (Appendix 1). As a result, GF-AAS was used in several instances to detect copper concentrations.

Graphite Furnace Atomic Absorption Spectrometry (GF-AAS)

Single element analysis of copper was performed using the GF-AAS method in which the sample was dried, charred to remove organics and other components, and then atomized. Copper was quantified by measuring the intensity of the transmitted radiation and applying a Deuterium lamp background correction system (Environment Canada 1998).

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Table 13. Analyses of sediment samples using ICP-AEF from sites where sediment was collected for amphipod bioassays ($mg \cdot L^{-1}$), 11 June 1997. SVR = sediment volatile residue ($mg \cdot Kg^{-1}$).

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Table 1. Sampling locations, 1997 and 1998, UTM (NAD-83 datum, zone 10), and latitude/longitude coordinates. GPS = position determined by post-processed Global Positioning System; est. = position estimated from hydrographic chart 3526).

SITE	UTM GRID		GEOGRAPHIC REFERENCE		COMMENTS
	EASTING	NORTHING	LATITUDE	LONGITUDE	
BB1	484569	5495591	49° 36.76'	123° 12.81'	GPS
BB1.5	484830	5495847	49° 36.90'	123° 12.60'	est.
BB2	485099	5496408	49° 37.20'	123° 12.38'	GPS
BB3	485051	5497019	49° 37.53'	123° 12.42'	GPS
BB4	485010	5497052	49° 37.55'	123° 12.45'	GPS
BB5	484923	5497521	49° 37.80'	123° 12.53'	GPS
DI1	481331	5494312	49° 36.07'	123° 15.50'	GPS
DI2	480891	5493424	49° 35.59'	123° 15.86'	GPS
DI3	477254	5492020	49° 34.82'	123° 18.88'	GPS
DI4	477056	5491978	49° 34.80'	123° 19.04'	GPS
DI5	475947	5491428	49° 34.50'	123° 19.96'	GPS
FC1	483603	5491659	49° 34.64'	123° 13.61'	GPS
FC2 *	483521	5491795	49° 34.69'	123° 13.68'	GPS
FC3	483536	5492193	49° 34.93'	123° 13.67'	GPS
FC4	483512	5492279	49° 34.97'	123° 13.69'	GPS
FC5	483541	5492378	49° 35.03'	123° 13.66'	GPS
FC6	483686	5492584	49° 35.14'	123° 13.54'	GPS
SC1	488497	5502663	49° 40.58'	123° 09.57'	est.
SC2	488396	5502540	49° 40.52'	123° 09.65'	est.
SC3	487974	5501985	49° 40.22'	123° 10.00'	est.
SC4	487371	5501091	49° 39.73'	123° 10.50'	est.
SC5	486267	5500507	49° 39.42'	123° 11.42'	est.
SC6	485625	5500447	49° 39.38'	123° 11.95'	est.
WF1	481316	5500985	49° 39.67'	123° 15.53'	est.
FCA-1	483472	5491883	49° 34.76'	123° 13.72'	GPS
FCA-2	483476	5491891	49° 34.76'	123° 13.72'	GPS
FCA-3	483474	5491898	49° 34.77'	123° 13.72'	GPS
FCB-1	483474	5492004	49° 34.82'	123° 13.72'	GPS
FCB-2	483473	5492009	49° 34.83'	123° 13.72'	GPS
FCB-3	483476	5492026	49° 34.84'	123° 13.72'	GPS
FCC-1	483472	5492096	49° 34.87'	123° 13.72'	GPS
FCC-2	483478	5492105	49° 34.88'	123° 13.71'	GPS
FCC-3	483480	5492117	49° 34.88'	123° 13.71'	GPS
FCD-1	483474	5492187	49° 34.92'	123° 13.71'	GPS
FCD-2	483478	5492187	49° 34.92'	123° 13.71'	GPS
FCD-3	483476	5492197	49° 34.93'	123° 13.83'	GPS
FCE-1	483480	5492296	49° 34.98'	123° 13.71'	GPS
FCE-2	483480	5492303	49° 34.99'	123° 13.71'	GPS
FCE-3	483482	5492315	49° 34.99'	123° 13.71'	GPS
FCF-1	483712	5492533	49° 35.11'	123° 13.52'	GPS
FCF-2	483720	5492543	49° 35.12'	123° 13.51'	GPS
FCF-3	483715	5492554	49° 35.12'	123° 13.52'	GPS
FCG-1	483832	5492708	49° 35.20'	123° 13.42'	GPS

Table 1 (continued).

SITE	UTM GRID EASTING	UTM GRID NORTHING	GEOGRAPHIC REFERENCE LATITUDE	GEOGRAPHIC REFERENCE LONGITUDE	COMMENTS
FCG-2	483843	5492718	49° 35.21'	123° 13.41'	GPS
FCG-3	483850	5492728	49° 35.22'	123° 13.40'	GPS
BBA-1	485074	5496394	49° 37.20'	123° 12.40'	GPS
BBA-2	485080	5496396	49° 37.20'	123° 12.39'	GPS
BBA-3	485089	5496403	49° 37.20'	123° 12.39'	GPS
BBB-1	485078	5496666	49° 37.34'	123° 12.40'	GPS
BBB-2	485086	5496686	49° 37.35'	123° 12.39'	GPS
BBB-3	485088	5496694	49° 37.36'	123° 12.39'	GPS
BBC-1	485019	5496875	49° 37.46'	123° 12.45'	GPS
BBC-2	485031	5496876	49° 37.46'	123° 12.44'	GPS
BBC-3	485050	5496889	49° 37.46'	123° 12.42'	GPS
BBD-1	485041	5496996	49° 37.52'	123° 12.43'	GPS
BBD-2	485037	5497003	49° 37.52'	123° 12.43'	GPS
BBD-3	485035	5497015	49° 37.53'	123° 12.43'	GPS
BBE-1	485000	5497052	49° 37.55'	123° 12.46'	GPS
BBE-2	485001	5497065	49° 37.56'	123° 12.46'	GPS
BBE-3	485002	5497075	49° 37.56'	123° 12.46'	GPS
BBF-1	485009	5497121	49° 37.59'	123° 12.45'	GPS
BBF-2	485010	5497136	49° 37.60'	123° 12.45'	GPS
BBF-3	485008	5497144	49° 37.60'	123° 12.46'	GPS
BBG-1	484935	5497490	49° 37.79'	123° 12.52'	GPS
BBG-2	484927	5497495	49° 37.79'	123° 12.52'	GPS
BBG-3	484919	5497504	49° 37.79'	123° 12.53'	GPS
M1	482517	5488598	49° 32.98'	123° 14.50'	GPS
M2	483495	5491576	49° 34.59'	123° 13.70'	GPS
M3	483449	5492326	49° 35.00'	123° 13.74'	GPS
M4	484432	5495475	49° 36.70'	123° 12.93'	GPS
M5	484790	5495997	49° 36.98'	123° 12.63'	GPS
M6	485078	5496458	49° 37.23'	123° 12.40'	GPS
M7	485010	5496947	49° 37.49'	123° 12.45'	GPS
M8	484972	5497077	49° 37.56'	123° 12.48'	GPS
M9	484916	5497446	49° 37.76'	123° 12.53'	GPS
M10	484599	5498032	49° 38.08'	123° 12.80'	GPS
M11	484100	5498789	49° 38.49'	123° 13.21'	GPS
M12	484075	5500172	49° 39.23'	123° 13.24'	GPS
M13	481226	5499119	49° 38.66'	123° 15.60'	GPS
M14	481527	5495114	49° 36.50'	123° 15.34'	GPS
M15	480944	5493418	49° 35.58'	123° 15.82'	GPS
F1	482761	5488720	49° 33.05'	123° 14.30'	est.
F2	485074	5496866	49° 37.45'	123° 12.40'	est.

* in Data Report 1044 this was reported as easting 483486 and northing 5491860

Table 2. Analyses of surface water samples using ICP-AES from 1997 beach seine sites ($mg \cdot L^{-1}$).

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	K

"Data can be found on diskette at the back of this report, pp. 40 - 69."

Table 2 (continued).

MG	MN	MO	NA	NI	P	PB	S	SB	SE	SI	SN	SR	TI	V	ZN

Table 3. Analyses of interstitial water samples using ICP-AES from 1997 beach seine sites ($mg \cdot L^{-1}$).

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE

"Data can be found on diskette at the back of this report, pp. 70 - 96."

Table 3 (continued).

K	MG	MN	MO	NA	NI	P	PB	S	SB	SE	SI	SN	SR	TI	V	ZN

Table 4. Analyses of surface water samples for dissolved copper using GF-AAS from 1997 beach seine sites ($mg \cdot L^{-1}$).

SITE	REPLICATE	DATE	CU
FC1	a	19970505	0.0208
FC1	b	19970505	0.011
FC1	c	19970505	0.008
FC2	a	19970505	0.0163
FC2	b	19970505	0.0146
FC2	c	19970505	0.017
FC3	a	19970505	0.012
FC3	b	19970505	0.0123
FC3	c	19970505	0.0126
FC4	a	19970505	0.0177
FC4	b	19970505	0.0193
FC4	c	19970505	0.0149
FC5	a	19970505	0.0198
FC5	b	19970505	0.0179
FC5	c	19970505	0.0187
FC6	a	19970505	0.0196
FC6	b	19970505	0.0191
FC6	c	19970505	0.0197
BB1	a	19970506	0.0052
BB1	b	19970506	0.005
BB1	c	19970506	0.0039
BB2	a	19970506	0.0128
BB2	b	19970506	0.0116
BB2	c	19970506	0.0154
BB3	a	19970506	0.49
BB3	b	19970506	0.6
BB3	c	19970506	0.63
BB4	a	19970506	0.032
BB4	b	19970506	0.038
BB4	c	19970506	0.032

Table 4 (continued).

SITE	REPLICATE	DATE	CU
BB5	a	19970506	0.0145
BB5	b	19970506	0.0151
BB5	c	19970506	0.0124
DI1	a	19970507	0.0126
DI1	b	19970507	0.0127
DI1	c	19970507	0.0114
DI2	a	19970507	0.0095
DI2	b	19970507	0.0103
DI2	c	19970507	0.0096
DI3	a	19970507	0.0088
DI3	b	19970507	0.0105
DI3	c	19970507	0.010
DI4	a	19970507	0.010
DI4	b	19970507	0.0102
DI4	c	19970507	0.0062
DI5	a	19970507	0.0047
DI5	b	19970507	0.0050
DI5	c	19970507	0.0046
FC1	a	19970520	0.0063
FC1	b	19970520	0.0062
FC1	c	19970520	0.0064
FC2	a	19970520	0.007
FC2	b	19970520	0.0071
FC2	c	19970520	0.0062
FC3	a	19970520	0.0068
FC3	b	19970520	0.0055
FC3	c	19970520	0.0053
FC4	a	19970520	0.0059
FC4	b	19970520	0.0059
FC4	c	19970520	0.0046
FC5	a	19970520	0.0056
FC5	b	19970520	0.0047
FC5	c	19970520	0.0048

Table 4 (continued).

SITE	REPLICATE	DATE	CU
FC6	a	19970520	0.0061
FC6	b	19970520	0.006
FC6	c	19970520	0.0062
BB1	a	19970521	0.0051
BB1	b	19970521	0.0044
BB1	c	19970521	0.0043
BB2	a	19970521	0.035
BB2	b	19970521	0.038
BB2	c	19970521	0.038
BB3	a	19970521	2.8
BB3	b	19970521	2.51
BB3	c	19970521	2.7
BB4	a	19970521	0.11
BB4	b	19970521	0.071
BB4	c	19970521	0.078
BB5	a	19970521	0.056
BB5	b	19970521	0.058
BB5	c	19970521	0.054
DI1	a	19970527	0.0151
DI1	b	19970527	0.0166
DI1	c	19970527	0.0172
DI2	a	19970527	0.0092
DI2	b	19970527	0.0116
DI2	c	19970527	0.0132
DI3	a	19970527	0.0085
DI3	b	19970527	0.0061
DI3	c	19970527	0.0046
DI4	a	19970527	0.0032
DI4	b	19970527	0.002
DI4	c	19970527	0.0038
DI5	a	19970527	0.0089
DI5	b	19970527	0.0077
DI5	c	19970527	0.0081

Table 4 (continued).

SITE	REPLICATE	DATE	CU
FC1	a	19970604	0.0054
FC1	b	19970604	0.0056
FC1	c	19970604	0.0053
FC2	a	19970604	0.0055
FC2	b	19970604	0.0057
FC2	c	19970604	0.0055
FC3	a	19970604	0.0051
FC3	b	19970604	0.0049
FC3	c	19970604	0.0047
FC4	a	19970604	0.0059
FC4	b	19970604	0.0072
FC4	c	19970604	0.0067
FC5	a	19970604	0.0085
FC5	b	19970604	0.0091
FC5	c	19970604	0.0098
FC6	a	19970604	0.0139
FC6	b	19970604	0.0159
FC6	c	19970604	0.015
BB1	a	19970605	0.0076
BB1	b	19970605	0.0087
BB1	c	19970605	0.0088
BB2	a	19970605	0.268
BB2	b	19970605	0.25
BB2	c	19970605	0.28
BB3	a	19970605	0.755
BB3	b	19970605	0.776
BB3	c	19970605	0.765
BB4	a	19970605	0.854
BB4	b	19970605	0.396
BB4	c	19970605	0.33
BB5	a	19970605	0.078
BB5	b	19970605	0.054
BB5	c	19970605	0.068

Table 4 (continued).

SITE	REPLICATE	DATE	CU
DI1	a	19970606	0.0047
DI1	b	19970606	0.0067
DI1	c	19970606	0.0063
DI2	a	19970606	0.0068
DI2	b	19970606	0.0058
DI2	c	19970606	0.0052
DI3	a	19970606	0.0039
DI3	b	19970606	0.0041
DI3	c	19970606	0.0025
DI4	a	19970606	0.0053
DI4	b	19970606	0.0069
DI4	c	19970606	0.0049
DI5	a	19970606	0.007
DI5	b	19970606	0.0065
DI5	c	19970606	0.0056
BB1	a	19970620	0.0038
BB1	b	19970620	0.0053
BB1	c	19970620	0.0048
BB2	a	19970620	0.0108
BB2	b	19970620	0.0109
BB2	c	19970620	0.0099
BB3	a	19970620	0.42
BB3	b	19970620	0.38
BB3	c	19970620	0.43
BB4	a	19970620	0.15
BB4	b	19970620	0.15
BB4	c	19970620	0.14
BB5	a	19970620	0.14
BB5	b	19970620	0.19
BB5	c	19970620	0.14
BB1	a	19970704	0.0125
BB1	b	19970704	0.0137
BB1	c	19970704	0.0138

Table 4 (continued).

SITE	REPLICATE	DATE	CU
BB2	a	19970704	0.019
BB2	b	19970704	0.0171
BB2	c	19970704	0.0158
BB3	a	19970704	0.81
BB3	b	19970704	0.79
BB3	c	19970704	0.94
BB4	a	19970704	0.047
BB4	b	19970704	0.038
BB4	c	19970704	0.037
BB5	a	19970704	0.026
BB5	b	19970704	0.029
BB5	c	19970704	0.0353
BB1	a	19970717	0.0025
BB1	b	19970717	0.0017
BB1	c	19970717	0.0017
BB2	a	19970717	0.0181
BB2	b	19970717	0.007
BB2	c	19970717	0.0061
BB3	a	19970717	1.04
BB3	b	19970717	1.06
BB3	c	19970717	1.11
BB4	a	19970717	0.289
BB4	b	19970717	0.35
BB4	c	19970717	0.261
BB5	a	19970717	0.026
BB5	b	19970717	0.0211
BB5	c	19970717	0.028
BB1	a	19970801	0.0026
BB1	b	19970801	0.0033
BB1	c	19970801	0.0025
BB2	a	19970801	0.0062
BB2	b	19970801	0.008
BB2	c	19970801	0.0076

Table 4 (continued).

SITE	REPLICATE	DATE	CU
BB3	a	19970801	0.53
BB3	b	19970801	0.895
BB3	c	19970801	0.64
BB4	a	19970801	0.21
BB4	b	19970801	0.11
BB4	c	19970801	0.1
BB5	a	19970801	0.0194
BB5	b	19970801	0.0214
BB5	c	19970801	0.027
BB1	a	19970814	0.0016
BB1	b	19970814	0.0012
BB1	c	19970814	0.0022
BB2	a	19970814	0.002
BB2	b	19970814	0.0029
BB2	c	19970814	0.0031
BB3	a	19970814	0.34
BB3	b	19970814	0.3
BB3	c	19970814	0.33
BB4	a	19970814	0.0173
BB4	b	19970814	0.0276
BB4	c	19970814	0.128
BB5	a	19970814	0.0091
BB5	b	19970814	0.0089
BB5	c	19970814	0.0103

Table 5. Analyses of interstitial water samples for dissolved copper using GF-AAS from 1997 beach seine sites ($mg \cdot L^{-1}$).

SITE	REPLICATE	DATE	CU
FC1	a	19970505	0.0026
FC1	b	19970505	0.0027
FC1	c	19970505	0.0024
FC2	a	19970505	0.0181
FC2	b	19970505	0.0168
FC2	c	19970505	0.0123
FC4	a	19970505	0.0069
FC4	b	19970505	0.0067
FC4	c	19970505	0.0091
FC5	a	19970505	0.009
FC5	b	19970505	0.018
FC5	c	19970505	0.0107
FC6	a	19970505	0.0218
FC6	b	19970505	0.011
FC6	c	19970505	0.012
BB1	a	19970506	0.0034
BB1	b	19970506	0.0026
BB1	c	19970506	0.0025
BB2	a	19970506	0.0079
BB2	b	19970506	0.0058
BB2	c	19970506	0.008
BB3	a	19970506	1.3
BB3	b	19970506	1.29
BB3	c	19970506	1.33
BB4	a	19970506	0.066
BB4	b	19970506	0.07
BB4	c	19970506	0.077
BB5	a	19970506	0.0183
BB5	b	19970506	0.018
BB5	c	19970506	0.019

Table 5 (continued).

SITE	REPLICATE	DATE	CU
DI1	a	19970507	0.0195
DI1	b	19970507	0.0188
DI1	c	19970507	0.0188
DI2	a	19970507	0.0049
DI2	b	19970507	0.0049
DI2	c	19970507	0.0043
DI3	a	19970507	0.0054
DI3	b	19970507	0.0063
DI3	c	19970507	0.0072
DI4	a	19970507	0.0085
DI4	b	19970507	0.0085
DI4	c	19970507	0.0089
DI5	a	19970507	0.0056
DI5	b	19970507	0.0064
DI5	c	19970507	0.0060
FC1	a	19970520	0.0066
FC1	b	19970520	0.008
FC4	a	19970520	0.0067
FC4	b	19970520	0.0067
FC4	c	19970520	0.0068
FC5	a	19970520	0.0066
FC5	b	19970520	0.0068
FC5	c	19970520	0.0063
FC6	a	19970520	0.0163
FC6	b	19970520	0.0177
FC6	c	19970520	0.023
BB1	a	19970521	0.0045
BB1	b	19970521	0.004
BB1	c	19970521	0.0026
BB2	a	19970521	0.0053
BB2	b	19970521	0.0053
BB2	c	19970521	0.0051

Table 5 (continued).

SITE	REPLICATE	DATE	CU
BB3	a	19970521	1.28
BB3	b	19970521	1.34
BB3	c	19970521	0.13
BB4	a	19970521	0.041
BB4	b	19970521	0.035
BB4	c	19970521	0.032
BB5	a	19970521	0.027
BB5	b	19970521	0.021
BB5	c	19970521	0.023
DI1	a	9970527	0.0059
DI1	b	9970527	0.0061
DI1	c	9970527	0.0059
DI2	a	9970527	0.0023
DI2	b	9970527	0.002
DI2	c	9970527	0.0018
DI3	a	9970527	0.0039
DI3	b	9970527	0.0024
DI3	c	9970527	0.0031
DI4	a	9970527	0.0034
DI4	b	9970527	0.0042
DI4	c	9970527	0.0032
DI5	a	9970527	0.0031
DI5	b	9970527	0.0055
DI5	c	9970527	0.0028
FC1	a	19970604	0.0071
FC1	b	19970604	0.0114
FC1	c	19970604	0.0106
FC2	a	19970604	0.0072
FC2	b	19970604	0.0044
FC2	c	19970604	0.0051
FC3	a	19970604	0.0046
FC3	b	19970604	0.0046
FC3	c	19970604	0.0045

Table 5 (continued).

SITE	REPLICATE	DATE	CU
FC4	a	19970604	0.0039
FC4	b	19970604	0.004
FC4	c	19970604	0.0043
FC5	a	19970604	0.0094
FC5	b	19970604	0.0074
FC5	c	19970604	0.0297
FC6	a	19970604	0.0117
FC6	b	19970604	0.0121
FC6	c	19970604	0.0111
BB1	a	19970605	0.0079
BB1	b	19970605	0.005
BB1	c	19970605	0.0051
BB2	a	19970605	0.0122
BB2	b	19970605	0.0037
BB2	c	19970605	0.0032
BB3	a	19970605	0.36
BB3	b	19970605	0.609
BB3	c	19970605	0.025
BB4	a	19970605	0.088
BB4	b	19970605	0.112
BB4	c	19970605	0.183
BB5	a	19970605	0.0202
BB5	b	19970605	0.0157
BB5	c	19970605	0.019
DI1	a	19970606	0.0051
DI1	b	19970606	0.0031
DI1	c	19970606	0.0032
DI2	a	19970606	0.0056
DI2	b	19970606	0.0046
DI2	c	19970606	0.0054

Table 5 (continued).

SITE	REPLICATE	DATE	CU
DI3	a	19970606	0.0044
DI3	b	19970606	0.0039
DI3	c	19970606	0.0043
DI4	a	19970606	0.0026
DI4	b	19970606	0.0034
DI4	c	19970606	0.0026
DI5	a	19970606	0.0055
DI5	b	19970606	0.0061
DI5	c	19970606	0.0053
BB1	a	19970620	0.0042
BB1	b	19970620	0.0029
BB1	c	19970620	0.0029
BB2	a	19970620	0.0044
BB2	b	19970620	0.0415
BB2	c	19970620	0.0024
BB3	a	19970620	1.61
BB3	b	19970620	1.79
BB3	c	19970620	1.74
BB4	a	19970620	0.16
BB4	b	19970620	0.056
BB4	c	19970620	0.058
BB5	a	19970620	0.0131
BB5	b	19970620	0.0173
BB5	c	19970620	0.0162
BB1	a	19970704	0.0031
BB1	b	19970704	0.0016
BB1	c	19970704	0.0074
BB2	a	19970704	0.0051
BB2	b	19970704	0.0088
BB2	c	19970704	0.0036
BB3	a	19970704	1.2
BB3	b	19970704	1.23
BB3	c	19970704	1.24

Table 5 (continued).

SITE	REPLICATE	DATE	CU
BB4	a	19970704	0.036
BB4	b	19970704	0.029
BB4	c	19970704	0.032
BB5	a	19970704	0.031
BB5	b	19970704	0.0198
BB5	c	19970704	0.0391
BB1	a	19970717	0.0099
BB1	b	19970717	0.0041
BB1	c	19970717	0.0026
BB2	a	19970717	0.0049
BB2	b	19970717	0.0036
BB2	c	19970717	0.0036
BB4	a	19970717	0.0537
BB4	b	19970717	0.023
BB4	c	19970717	0.021
BB5	a	19970717	0.0142
BB5	b	19970717	0.0191
BB5	c	19970717	0.0198
BB1	a	19970801	0.0021
BB1	b	19970801	0.0026
BB1	c	19970801	0.0015
BB2	a	19970801	0.0043
BB2	b	19970801	0.0065
BB2	c	19970801	0.0081
BB3	a	19970801	2.0
BB3	b	19970801	1.84
BB3	c	19970801	1.83
BB4	a	19970801	0.0551
BB4	b	19970801	0.0612
BB4	c	19970801	0.068

Table 5 (continued).

SITE	REPLICATE	DATE	CU
BB5	a	19970801	0.0125
BB5	b	19970801	0.0133
BB5	c	19970801	0.0134
BB1	a	19970814	0.0034
BB1	b	19970814	0.0036
BB1	c	19970814	0.0036
BB2	a	19970814	0.0089
BB2	b	19970814	0.0079
BB2	c	19970814	0.0085
BB3	a	19970814	1.11
BB3	b	19970814	0.908
BB3	c	19970814	0.79
BB4	a	19970814	0.059
BB4	b	19970814	0.052
BB4	c	19970814	0.087
BB5	a	19970814	0.082
BB5	b	19970814	0.15
BB5	c	19970814	0.039

Table 6. Analyses of surface water samples for dissolved copper using GF-AAS from 1998 beach seine sites ($mg \cdot L^{-1}$).

SITE	DATE	CU
FC1	19980319	<0.005
FC4	19980319	<0.005
BB1.5	19980320	0.008
BB2	19980320	0.008
BB3	19980320	0.11
BB4	19980320	0.089
BB5	19980320	0.007
FC1	19980402	<0.005
FC4	19980402	<0.005
BB1.5	19980402	0.011
BB3	19980402	0.1
BB4	19980402	0.127
BB5	19980402	0.039
FC1	19980415	0.068
FC4	19980415	<0.005
BB1	19980415	<0.005
BB1.5	19980415	<0.005
BB3	19980415	0.412
BB4	19980415	0.064
BB5	19980415	0.073
FC1	19980507	0.011
FC4	19980507	0.007
BB1	19980507	0.01
BB1.5	19980507	0.01
BB4	19980507	1.79
BB5	19980507	0.36
BBC	19980507	2.07
FC1	19980514	0.008
FC4	19980514	0.01
BB1	19980514	0.014
BB1.5	19980514	0.01
BB3	19980514	1.31
BB4	19980514	0.187
BB5	19980514	0.019
BBC	19980514	2.1

Table 7. Analyses of surface water samples for dissolved copper using GF-AAS from 1998 amphipod basket trap sites ($mg \cdot L^{-1}$).

SITE	DATE	CU
FCA	19980323	<0.005
FCB	19980323	<0.005
FCC	19980323	<0.005
FCD	19980323	0.016
FCE	19980323	0.013
FCF	19980323	0.016
FCG	19980323	0.013
BBA	19980323	0.017
BBB	19980323	0.023
BBC	19980323	0.144
BBD	19980323	0.633
BBE	19980323	0.162
BBF	19980323	0.146
BBG	19980323	0.167

Table 8. Analyses of surface water samples using ICP-AES and GF-AAS from 1998 fish cage sites ($mg \cdot L^{-1}$).

SITE	DATE	ANALYSIS	AG	AL	AS	B	BA	BE	CA	CD	CO	CR

"Data can be found on diskette at the back of this report, pp. 97 - 98."

Table 8 (continued).

CU	FE	K	MG	MN	MO	NA	NI	P	PB	S	SB	SE	SI	SN	SR	TI	V	ZN

Table 9. Analyses of surface water samples using ICP-AES from 1998 mussel cage sites ($mg\,L^{-1}$).

SITE	DATE	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	K

"Data can be found on diskette at the back of this report, pp. 99 - 102."

Table 9 (continued).

MG	MN	MO	NA	NI	P	PB	S	SB	SE	SI	SN	SR	TI	V	ZN

Table 10. Analyses of surface water samples for dissolved copper using GF-AAS from mussel cage sites ($mg \cdot L^{-1}$).

SITE	REPLICATE	DATE	CU
M1	a	19980429	0.006
M1	b	19980429	0.008
M1	c	19980429	<0.005
M2		19980429	0.007
M3		19980429	0.006
M4		19980429	0.008
M5		19980429	0.006
M6		19980429	0.007
M7	a	19980429	0.48
M7	b	19980429	0.434
M7	c	19980429	0.38
M8	a	19980429	0.039
M8	b	19980429	0.025
M8	c	19980429	0.057
M9		19980429	<0.005
M10		19980429	0.01
M11		19980429	0.007
M12		19980429	0.006
M13		19980429	<0.005
M14		19980429	<0.005
M15		19980429	<0.005
M1	a	19980515	<0.005
M1	b	19980515	0.017
M1	c	19980515	0.013
M2		19980515	0.008
M3		19980515	<0.005
M4		19980515	<0.005
M5		19980515	<0.005
M6		19980515	<0.005
M7	a	19980515	0.722
M7	b	19980515	0.64
M7	c	19980515	1.03
M8	a	19980515	0.024
M8	b	19980515	0.223
M8	c	19980515	0.115
M9		19980515	0.04
M10		19980515	<0.005
M11		19980515	0.018
M12		19980515	<0.005
M13		19980515	<0.005
M14		19980515	0.1

Table 10 (continued).

SITE	REPLICATE	DATE	CU
M1	a	19980528	<0.005
M1	b	19980528	<0.005
M1	c	19980528	<0.005
M2		19980528	0.012
M3		19980528	<0.005
M4		19980528	0.015
M5		19980528	0.006
M6		19980528	0.018
M7	a	19980528	0.937
M7	b	19980528	1.09
M7	c	19980528	1
M8	a	19980528	0.185
M8	b	19980528	0.171
M8	c	19980528	0.211
M9		19980528	0.185
M10		19980528	0.031
M11		19980528	<0.005
M13		19980528	<0.005
M14		19980528	<0.005
M15		19980528	<0.005
M1	a	19980608	0.01
M1	b	19980608	<0.005
M1	c	19980608	<0.005
M2		19980608	0.012
M3		19980608	0.011
M4		19980608	0.007
M5		19980608	<0.005
M6		19980608	<0.005
M7	a	19980608	0.73
M7	b	19980608	0.83
M7	c	19980608	0.91
M8	a	19980608	0.031
M8	b	19980608	0.027
M8	c	19980608	0.039
M9		19980608	0.040
M10		19980608	0.006
M11		19980608	0.019
M12		19980608	0.008
M13		19980608	<0.005
M14		19980608	<0.005
M15		19980608	<0.005

Table 11. Analyses of sediment samples using ICP-AES from Britannia (BCr), and Furry Creeks (FCr), 5 January 1998 ($mg \cdot kg^{-1}$, dry weight basis).

	SITE					
	BCr1	BCr2	BCr3	FCr1	FCr2	FCr3
% MOIST	26.4	17.5	21.4	17.3	20.4	22.0
AL	14700	20900	22300	13100	15900	14800
BA	32	37	51	52	57	60
BI	< 10	12	14	< 10	< 10	< 10
CA	4680	7840	8460	4190	5300	4830
CR	63	34	35	17	15	18
CO	6	8	9	5	6	5
CU	281	338	564	55	40	67
FE	51400	24000	27200	17700	18000	19600
LI	9	14	14	10	10	10
MG	7100	12100	13000	6250	6450	6830
MN	432	496	542	337	364	348
MO	5	< 4	< 4	< 4	< 4	< 4
NI	18	19	21	11	9	9
P	386	377	446	308	296	313
K	808	821	889	1290	1360	1350
NA	584	873	961	602	756	715
TI	942	945	1070	573	866	903
V	41	54	61	42	47	52
ZN	122	113	136	65	60	68
C (%)	0.30	0.15	0.24	<0.05	0.10	0.18

Table 12. Analyses of interstitial water samples using ICP-AES from sites where sediment was collected for amphipod bioassays ($mg \cdot L^{-1}$), 11 June 1997.

	BB5			BCr4		
	a	b	c	a	b	c
AG	< 1	< 1	< 1	< 1	< 1	< 1
AL	< 5	< 5	< 5	< 5	< 5	< 5
AS	< 5	< 5	< 5	< 5	< 5	< 5
B	< 1	< 1	< 1	< 1	< 1	< 1
BA	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1
BE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CA	30	30	30	< 10	< 10	< 10
CD	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
CO	< 0.5	< 0.5	0.7	0.7	< 0.5	0.6
CR	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
CU	< 0.5	1	< 0.5	0.9	< 0.5	1.1
FE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
K	20	30	30	< 10	< 10	< 10
MG	70	70	70	10	10	< 10
MN	< 0.1	0.1	< 0.1	< 0.1	0.1	< 0.1
MO	< 1	< 1	< 1	< 1	< 1	< 1
NA	660	660	630	130	130	130
NI	< 2	< 2	< 2	< 2	< 2	< 2
P	< 10	< 10	< 10	< 10	< 10	< 10
PB	< 5	< 5	< 5	< 5	< 5	< 5
S	58	55	53	19	20	18
SB	< 5	< 5	< 5	< 5	< 5	< 5
SE	< 5	< 5	< 5	< 5	< 5	< 5
SI	< 5	< 5	< 5	< 5	< 5	< 5
SN	< 5	< 5	< 5	< 5	< 5	< 5
SR	0.4	0.5	0.5	0.1	0.1	0.1
TI	< 0.2	< 0.2	< 0.2	0.2	< 0.2	< 0.2
V	< 1	< 1	< 1	< 1	< 1	< 1
ZN	0.7	0.3	4.2	0.2	0.2	< 0.2

Table 13. Analyses of sediment samples using ICP-AEF from sites where sediment was collected for amphipod bioassays ($mg \cdot L^{-1}$), 11 June 1997. SVR = sediment volatile residue ($mg \cdot Kg^{-1}$).

	BB5			BCr4		
	a	b	c	a	b	c
AG	< 2	< 2	< 2	< 2	< 2	< 2
AL	16810	15370	14920	32090	31980	32460
AS	< 8	< 8	< 8	< 8	< 8	< 8
BA	126	114	141	90.1	101	89.5
BE	0.2	0.2	0.3	0.3	0.4	0.4
CA	7400	6380	5540	11000	11000	9970
CD	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
CO	16.3	15	13	21.1	21.4	21.7
CR	24.5	23.8	24.7	48.1	50.3	47.4
CU	316.3	334.1	374.3	1297	1225	1484
FE	34310	34600	32100	35210	34500	36070
K	1370	1260	1180	1957	2092	1850
MG	5480	5260	5350	11800	11600	11700
MN	368.3	328.3	323.5	594.9	589.5	609.4
MO	2	3	2	2	3	3
NA	1400	1500	1700	870	850	850
NI	18	20	21	27	26	27
P	500	490	510	540	590	570
PB	165	140	184	52	46	67
S	198	216	231	1410	1320	1410
SB	< 8	10	< 8	< 8	< 8	10
SE	< 8	< 8	< 8	< 8	< 8	< 8
SI	1430	1340	1420	1250	1190	1170
SN	< 8	< 8	< 8	< 8	< 8	< 8
SR	96.2	82.5	71.1	69.7	70.7	65
TI	1730	1580	1533	2180	2176	2190
V	80	74	69	90	88	88
ZN	168	188.1	181.6	256.1	250.7	263.9
SVR (fixed)	990000	993000	991000	965000	964000	964000
SVR (volatile)	9700	7400	8900	34700	35600	36400

Appendix 1. Dissolved metal (ICP-AES) detection limits (see Appendix 1c for explanation of code).

SITE	DATE	DETECTION CODE	
		SURFACE	INTERSTITIAL

"Data can be found on diskette at the back of this report, pp. 103 - 109."

Table 2. Analyses of surface water samples using ICP-AES from 1997 beach seine sites ($mg \cdot L^{-1}$).

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
FC1	a	19970421	< 0.3	< 1	< 1	2	< 0.03	< 0.03	110	< 0.1
FC1	b	19970421	< 0.3	< 1	< 1	2	< 0.03	< 0.03	110	< 0.1
FC1	c	19970421	< 0.3	< 1	< 1	2	< 0.03	< 0.03	120	< 0.1
FC2	a	19970421	< 0.5	< 3	< 3	3	< 0.05	< 0.05	190	< 0.3
FC2	b	19970421	< 0.5	< 3	< 3	4	< 0.05	< 0.05	270	< 0.3
FC2	c	19970421	< 0.5	< 3	< 3	4	< 0.05	< 0.05	270	< 0.3
FC3	a	19970421	< 0.01	0.07	< 0.05	0.05	0.002	< 0.001	5.4	< 0.005
FC3	b	19970421	< 0.01	0.07	< 0.05	0.1	0.002	< 0.001	9.7	< 0.005
FC3	c	19970421	< 0.01	0.06	< 0.05	0.17	0.003	< 0.001	15.6	0.006
FC4	a	19970421	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	51	< 0.05
FC4	b	19970421	< 0.1	< 0.5	< 0.5	0.8	< 0.01	< 0.01	54	0.06
FC4	c	19970421	< 0.1	< 0.5	< 0.5	1.1	< 0.01	< 0.01	78	< 0.05
FC5	a	19970421	< 0.5	< 3	< 3	3	< 0.05	< 0.05	200	< 0.3
FC5	b	19970421	< 0.5	< 3	< 3	3	0.05	< 0.05	200	< 0.3
FC5	c	19970421	< 0.5	< 3	< 3	4	< 0.05	< 0.05	200	< 0.3
FC6	a	19970421	< 1	< 5	< 5	6	< 0.1	< 0.1	210	< 0.5
FC6	b	19970421	< 1	< 5	< 5	4	< 0.1	< 0.1	200	< 0.5
FC6	c	19970421	< 1	< 5	< 5	7	< 0.1	< 0.1	200	< 0.5
SC1	a	19970422	< 0.01	0.12	< 0.05	0.13	0.003	< 0.001	10.9	0.007
SC1	b	19970422	< 0.01	0.13	< 0.05	0.14	0.004	< 0.001	11.3	< 0.005
SC1	c	19970422	< 0.01	0.13	< 0.05	0.13	0.002	< 0.001	10.5	< 0.005
SC2	a	19970422	< 0.01	0.11	< 0.05	0.04	< 0.001	< 0.001	4.3	0.005
SC2	b	19970422	< 0.01	0.08	< 0.05	0.02	0.003	< 0.001	2.3	< 0.005
SC2	c	19970422	< 0.01	0.09	< 0.05	0.04	0.004	< 0.001	3.4	< 0.005
SC3	a	19970422	< 0.1	< 0.5	< 0.5	0.7	0.02	< 0.01	55	< 0.05
SC3	b	19970422	< 0.1	< 0.5	< 0.5	0.9	0.04	< 0.01	54	0.06
SC3	c	19970422	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	50	< 0.05
SC4	a	19970422	< 0.3	< 1	< 1	1	< 0.03	< 0.03	56	< 0.1
SC4	b	19970422	< 0.3	< 1	< 1	1	< 0.03	< 0.03	70	< 0.1
SC4	c	19970422	< 0.3	< 1	< 1	1	< 0.03	< 0.03	50	< 0.1
SC5	a	19970422	< 0.1	< 0.5	< 0.5	0.9	< 0.01	< 0.01	61	< 0.05
SC5	b	19970422	< 0.1	< 0.5	< 0.5	0.9	< 0.01	< 0.01	66	< 0.05
SC5	c	19970422	< 0.1	< 0.5	< 0.5	0.8	< 0.01	< 0.01	57	< 0.05

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
< 0.1	< 0.1	0.2	< 0.1	110	356	< 0.03	< 0.3	3090	< 0.5	< 3	< 1
< 0.1	0.2	0.2	< 0.1	110	346	< 0.03	< 0.3	3000	< 0.5	< 3	< 1
< 0.1	< 0.1	0.2	< 0.1	120	370	< 0.03	< 0.3	3190	< 0.5	< 3	< 1
< 0.3	0.51	0.3	< 0.3	190	603	< 0.05	< 0.5	5200	< 1	< 5	< 3
< 0.3	0.92	< 0.3	< 0.3	270	866	< 0.05	< 0.5	7440	< 1	< 5	< 3
< 0.3	0.4	0.3	< 0.3	270	854	< 0.05	< 0.5	7320	< 1	< 5	< 3
< 0.005	0.006	0.009	0.007	3.9	11.9	< 0.001	< 0.01	102	< 0.02	< 0.1	< 0.05
< 0.005	0.017	0.009	0.011	8.3	25.5	< 0.001	< 0.01	217	< 0.02	< 0.1	< 0.05
< 0.005	< 0.005	0.009	< 0.005	14.8	44.6	0.001	< 0.01	377	< 0.02	< 0.1	< 0.05
< 0.05	< 0.05	0.07	< 0.05	53	160	< 0.01	< 0.1	1370	< 0.2	< 1	< 0.5
< 0.05	0.17	< 0.05	< 0.05	54	167	< 0.01	< 0.1	1430	< 0.2	< 1	< 0.5
< 0.05	0.07	0.09	< 0.05	78	243	< 0.01	< 0.1	2070	< 0.2	< 1	< 0.5
< 0.3	< 0.3	< 0.3	< 0.3	200	621	< 0.05	< 0.5	5280	< 1	< 5	< 3
< 0.3	0.4	0.3	0.5	200	619	< 0.05	< 0.5	5270	< 1	< 5	< 3
0.3	< 0.3	< 0.3	< 0.3	200	621	< 0.05	< 0.5	5290	< 1	< 5	< 3
< 0.5	1.2	< 0.5	< 0.5	210	660	< 0.1	< 1	5670	< 2	< 10	< 5
< 0.5	< 0.5	0.5	< 0.5	200	630	< 0.1	< 1	5380	< 2	< 10	< 5
< 0.5	0.9	< 0.5	< 0.5	200	640	< 0.1	< 1	5500	< 2	< 10	< 5
< 0.005	0.008	< 0.005	0.026	11.1	33.8	0.003	< 0.01	293	< 0.02	< 0.1	< 0.05
0.006	< 0.005	< 0.005	0.025	11.7	35	0.003	< 0.01	303	< 0.02	< 0.1	< 0.05
< 0.005	< 0.005	< 0.005	0.02	10.7	32.1	0.002	< 0.01	277	< 0.02	< 0.1	< 0.05
< 0.005	< 0.005	< 0.005	0.012	3.8	11.1	0.002	< 0.01	96.3	< 0.02	< 0.1	< 0.05
< 0.005	< 0.005	< 0.005	0.019	1.7	4.7	< 0.001	< 0.01	40.8	< 0.02	< 0.1	< 0.05
0.008	0.009	0.008	0.018	2.9	8.3	0.004	< 0.01	70.7	< 0.02	< 0.1	< 0.05
0.05	< 0.05	0.06	0.06	54	166	< 0.01	< 0.1	1430	< 0.2	< 1	< 0.5
0.05	< 0.05	0.18	0.16	56	164	0.03	< 0.1	1400	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.09	< 0.05	48	150	< 0.01	< 0.1	1300	< 0.2	< 1	< 0.5
< 0.1	< 0.1	0.2	0.28	56	170	< 0.03	< 0.3	1460	< 0.5	< 3	< 1
< 0.1	< 0.1	< 0.1	< 0.1	68	210	< 0.03	< 0.3	1830	< 0.5	< 3	< 1
< 0.1	< 0.1	0.2	< 0.1	47	150	0.03	< 0.3	1320	< 0.5	< 3	< 1
< 0.05	< 0.05	0.07	0.06	60	183	< 0.01	< 0.1	1570	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.07	< 0.05	65	197	< 0.01	< 0.1	1680	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	0.13	59	175	< 0.01	< 0.1	1500	< 0.2	< 1	< 0.5

S	SB	SE	SI	SN	SR	TI	V	ZN
253	< 1	< 1	3	< 1	2.2	< 0.05	< 0.3	< 0.05
246	< 1	< 1	2	< 1	2.1	< 0.05	< 0.3	< 0.05
263	< 1	< 1	2.9	< 1	2.3	< 0.05	< 0.3	0.08
430	< 3	< 3	< 3	< 3	3.7	< 0.1	< 0.5	< 0.1
620	< 3	< 3	3	< 3	5.35	< 0.1	< 0.5	< 0.1
610	< 3	< 3	3	< 3	5.3	< 0.1	< 0.5	< 0.1
8.97	< 0.05	< 0.05	1.88	< 0.05	0.08	< 0.002	< 0.01	0.005
18.9	< 0.05	< 0.05	1.91	< 0.05	0.164	< 0.002	< 0.01	0.005
32.8	< 0.05	< 0.05	1.89	< 0.05	0.282	< 0.002	< 0.01	< 0.002
115	< 0.5	< 0.5	1.7	< 0.5	1	< 0.02	< 0.1	< 0.02
120	< 0.5	< 0.5	1.7	< 0.5	1.04	< 0.02	< 0.1	< 0.02
175	< 0.5	< 0.5	2.1	< 0.5	1.51	< 0.02	< 0.1	< 0.02
442	< 3	< 3	< 3	< 3	3.9	0.1	< 0.5	< 0.1
443	< 3	< 3	4	< 3	3.9	< 0.1	< 0.5	1.4
444	< 3	< 3	5	< 3	3.9	< 0.1	< 0.5	0.2
473	< 5	< 5	9	< 5	4.1	< 0.2	< 1	0.2
450	< 5	< 5	< 5	< 5	3.9	< 0.2	< 1	< 0.2
457	< 5	< 5	7	< 5	4	< 0.2	< 1	< 0.2
25.3	< 0.05	< 0.05	1.55	< 0.05	0.211	< 0.002	< 0.01	< 0.002
26.3	< 0.05	< 0.05	1.62	< 0.05	0.219	< 0.002	< 0.01	< 0.002
24.2	< 0.05	< 0.05	1.53	< 0.05	0.201	< 0.002	< 0.01	< 0.002
8.44	< 0.05	< 0.05	1.43	< 0.05	0.071	< 0.002	< 0.01	< 0.002
3.62	< 0.05	< 0.05	1.49	< 0.05	0.032	< 0.002	< 0.01	< 0.002
6.25	< 0.05	< 0.05	1.51	< 0.05	0.054	0.006	< 0.01	< 0.002
124	< 0.5	< 0.5	2.2	< 0.5	1.04	0.02	< 0.1	< 0.02
122	< 0.5	0.7	2.8	< 0.5	1.03	0.1	< 0.1	0.03
113	< 0.5	< 0.5	2.5	< 0.5	0.94	< 0.02	< 0.1	< 0.02
126	< 1	< 1	3.2	< 1	1.1	0.08	< 0.3	< 0.05
160	< 1	< 1	2.6	< 1	1.3	< 0.05	< 0.3	< 0.05
114	< 1	< 1	2	< 1	0.95	< 0.05	< 0.3	< 0.05
140	< 0.5	< 0.5	2.3	< 0.5	1.15	< 0.02	< 0.1	< 0.02
151	< 0.5	< 0.5	2.2	< 0.5	1.23	< 0.02	< 0.1	< 0.02
132	< 0.5	< 0.5	2	< 0.5	1.09	< 0.02	< 0.1	< 0.02

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
BB1	a	19970424	< 1	< 5	< 5	1	< 0.1	< 0.1	70	< 0.5
BB1	b	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	80	< 0.5
BB1	c	19970424	< 1	< 5	< 5	3	< 0.1	< 0.1	80	< 0.5
BB2	a	19970424	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100	< 0.5
BB2	b	19970424	< 1	< 5	< 5	2	0.2	< 0.1	100	< 0.5
BB2	c	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	100	< 0.5
BB3	a	19970424	< 1	< 5	< 5	4	< 0.1	< 0.1	70	< 0.5
BB3	b	19970424	< 1	< 5	< 5	3	< 0.1	< 0.1	80	< 0.5
BB3	c	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	80	< 0.5
BB4	a	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	70	< 0.5
BB4	b	19970424	< 1	< 5	< 5	3	0.2	< 0.1	80	< 0.5
BB4	c	19970424	< 1	< 5	< 5	4	< 0.1	< 0.1	80	< 0.5
BB5	a	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	60	< 0.5
BB5	b	19970424	< 1	< 5	< 5	3	< 0.1	< 0.1	60	< 0.5
BB5	c	19970424	< 1	< 5	< 5	3	< 0.1	< 0.1	70	< 0.5
DI1	a	19970425	< 0.3	< 1	< 1	1	< 0.03	< 0.03	94	< 0.1
DI1	b	19970425	< 0.3	< 1	< 1	1	< 0.03	< 0.03	84	< 0.1
DI1	c	19970425	< 0.3	< 1	< 1	1	< 0.03	< 0.03	99	< 0.1
DI2	a	19970425	< 0.3	< 1	< 1	1	< 0.03	< 0.03	78	< 0.1
DI2	b	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	100	< 0.1
DI2	c	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	130	< 0.1
DI3	a	19970425	< 0.5	< 3	< 3	2	0.05	< 0.05	120	< 0.3
DI3	b	19970425	< 0.5	< 3	< 3	3	0.2	< 0.05	130	< 0.3
DI3	c	19970425	< 0.3	< 1	< 1	1	< 0.03	< 0.03	93	< 0.1
DI4	a	19970425	< 0.3	< 1	< 1	2	0.08	< 0.03	84	< 0.1
DI4	b	19970425	< 0.3	< 1	< 1	1	0.03	< 0.03	71	< 0.1
DI4	c	19970425	< 0.3	< 1	< 1	2	0.03	< 0.03	93	< 0.1
DI5	a	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	120	< 0.1
DI5	b	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	120	< 0.1
DI5	c	19970425	< 0.3	< 1	< 1	1	< 0.03	< 0.03	68	< 0.1
WF1	a	19970430	< 1	< 5	< 5	2	< 0.1	< 0.1	40	< 0.5
WF1	b	19970430	< 1	< 5	< 5	1	< 0.1	< 0.1	40	< 0.5
WF1	c	19970430	< 1	< 5	< 5	3	< 0.1	< 0.1	40	< 0.5
FC1	a	19970505	< 1	< 5	< 5	1	< 0.1	0.1	130	< 0.5
FC1	b	19970505	< 1	< 5	< 5	1	< 0.1	0.1	150	< 0.5
FC1	c	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	110	< 0.5

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
< 0.5	< 0.5	< 0.5	1.8	80	230	< 0.1	< 1	1920	< 2	< 10	5
< 0.5	< 0.5	< 0.5	1.4	100	250	< 0.1	< 1	2060	< 2	< 10	< 5
< 0.5	1.1	< 0.5	1.9	80	260	< 0.1	< 1	2230	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.5	90	300	< 0.1	< 1	2540	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	1.3	110	310	< 0.1	< 1	2620	< 2	< 10	6
< 0.5	< 0.5	< 0.5	< 0.5	90	300	< 0.1	< 1	2560	< 2	< 10	< 5
0.6	2.1	< 0.5	< 0.5	60	190	0.3	< 1	1610	< 2	< 10	< 5
< 0.5	1.1	0.9	< 0.5	70	220	< 0.1	< 1	1900	< 2	< 10	< 5
< 0.5	0.9	0.9	< 0.5	70	190	0.2	< 1	1600	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	70	210	< 0.1	< 1	1840	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	80	260	< 0.1	< 1	2280	< 2	< 10	< 5
1.2	< 0.5	< 0.5	0.7	80	240	< 0.1	< 1	2050	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	170	< 0.1	< 1	1510	< 2	< 10	< 5
< 0.5	0.9	< 0.5	0.5	50	170	0.2	< 1	1460	< 2	< 10	< 5
< 0.5	2.2	< 0.5	< 0.5	50	200	0.2	< 1	1750	< 2	< 10	< 5
< 0.1	< 0.1	0.1	0.2	90	288	< 0.03	< 0.3	2500	< 0.5	< 3	< 1
< 0.1	< 0.1	0.2	< 0.1	82	255	< 0.03	< 0.3	2190	< 0.5	< 3	< 1
< 0.1	< 0.1	0.1	< 0.1	98	305	0.06	< 0.3	2620	< 0.5	< 3	< 1
< 0.1	< 0.1	< 0.1	< 0.1	75	240	0.06	< 0.3	2030	< 0.5	< 3	< 1
< 0.1	< 0.1	0.1	< 0.1	100	307	< 0.03	< 0.3	2630	< 0.5	< 3	< 1
< 0.1	< 0.1	< 0.1	< 0.1	140	428	0.04	< 0.3	3680	< 0.5	< 3	< 1
< 0.3	< 0.3	< 0.3	< 0.3	120	390	0.1	< 0.5	3400	< 1	< 5	< 3
0.53	< 0.3	0.74	0.71	140	430	0.08	< 0.5	3660	< 1	< 5	3
< 0.1	< 0.1	< 0.1	< 0.1	87	290	< 0.03	< 0.3	2560	< 0.5	< 3	< 1
< 0.1	< 0.1	0.56	< 0.1	89	269	0.06	< 0.3	2320	< 0.5	< 3	< 1
< 0.1	< 0.1	0.26	< 0.1	73	220	< 0.03	< 0.3	1940	< 0.5	< 3	< 1
< 0.1	< 0.1	0.54	< 0.1	96	292	< 0.03	< 0.3	2530	< 0.5	< 3	< 1
< 0.1	0.39	0.2	< 0.1	120	364	< 0.03	< 0.3	3110	< 0.5	< 3	< 1
< 0.1	< 0.1	< 0.1	< 0.1	120	366	< 0.03	< 0.3	3140	< 0.5	< 3	< 1
< 0.1	< 0.1	0.1	< 0.1	67	210	< 0.03	< 0.3	1820	< 0.5	< 3	< 1
< 0.5	0.8	< 0.5	< 0.5	30	110	< 0.1	< 1	940	< 2	< 10	< 5
< 0.5	0.6	< 0.5	0.7	50	120	< 0.1	< 1	990	< 2	< 10	< 5
0.6	< 0.5	< 0.5	< 0.5	30	110	0.1	< 1	950	< 2	< 10	< 5
< 0.5	0.8	< 0.5	< 0.5	130	410	< 0.1	< 1	3550	< 2	< 10	< 5
< 0.5	1	< 0.5	< 0.5	140	470	0.2	< 1	4070	< 2	< 10	< 5
< 0.5	0.8	< 0.5	< 0.5	120	370	< 0.1	< 1	3360	< 2	< 10	< 5

S	SB	SE	SI	SN	SR	TI	V	ZN
143	< 5	< 5	8	< 5	1.3	< 0.2	< 1	0.2
151	< 5	< 5	8	< 5	1.5	0.4	< 1	0.5
162	< 5	< 5	15	< 5	1.5	< 0.2	< 1	< 0.2
187	< 5	< 5	6	< 5	1.8	< 0.2	< 1	0.4
190	< 5	< 5	5	< 5	1.9	< 0.2	< 1	0.2
189	< 5	< 5	7	< 5	1.8	< 0.2	< 1	0.4
132	< 5	< 5	19	< 5	1.1	< 0.2	< 1	0.9
149	< 5	< 5	10	< 5	1.4	< 0.2	< 1	0.6
135	< 5	< 5	9	< 5	1.2	< 0.2	< 1	0.9
136	< 5	< 5	6	< 5	1.3	< 0.2	< 1	0.4
165	< 5	< 5	8	< 5	1.6	< 0.2	< 1	< 0.2
148	< 5	< 5	28	< 5	1.4	< 0.2	< 1	< 0.2
110	< 5	< 5	6	< 5	1	< 0.2	< 1	0.3
100	< 5	< 5	11	< 5	1	< 0.2	< 1	< 0.2
118	< 5	< 5	5	< 5	1.2	< 0.2	< 1	0.2
220	< 1	< 1	< 1	< 1	1.8	< 0.05	< 0.3	< 0.05
194	< 1	1	1	< 1	1.6	< 0.05	< 0.3	< 0.05
231	< 1	< 1	2	< 1	1.9	< 0.05	< 0.3	0.06
181	< 1	< 1	2	< 1	1.5	< 0.05	< 0.3	< 0.05
238	< 1	< 1	2	< 1	1.9	< 0.05	< 0.3	< 0.05
310	< 1	2	2	< 1	2.6	< 0.05	< 0.3	< 0.05
282	< 3	< 3	5	< 3	2.4	< 0.1	< 0.5	0.1
306	< 3	6.4	5.3	< 3	2.6	0.53	< 0.5	0.1
219	< 1	< 1	< 1	< 1	1.8	< 0.05	< 0.3	0.65
194	< 1	2	2	< 1	1.7	0.1	< 0.3	0.1
163	< 1	< 1	< 1	< 1	1.4	< 0.05	< 0.3	0.48
215	< 1	< 1	2	< 1	1.8	0.06	< 0.3	< 0.05
270	< 1	< 1	2	< 1	2.2	< 0.05	< 0.3	0.32
272	< 1	< 1	1	< 1	2.3	< 0.05	< 0.3	< 0.05
156	< 1	< 1	< 1	< 1	1.3	< 0.05	< 0.3	< 0.05
73	< 5	< 5	12	< 5	0.7	< 0.2	< 1	< 0.2
77	< 5	< 5	8	< 5	0.7	0.2	< 1	0.6
75	< 5	< 5	5	< 5	0.7	< 0.2	< 1	< 0.2
263	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	< 0.2
304	< 5	< 5	< 5	< 5	2.9	< 0.2	< 1	< 0.2
262	< 5	< 5	< 5	< 5	2.3	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
FC2	a	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	100	< 0.5
FC2	b	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	100	< 0.5
FC2	c	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	120	< 0.5
FC3	a	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	90	< 0.5
FC3	b	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	90	< 0.5
FC3	c	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	100	< 0.5
FC4	a	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	110	< 0.5
FC4	b	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	110	< 0.5
FC4	c	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	90	< 0.5
FC5	a	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	140	< 0.5
FC5	b	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	130	< 0.5
FC5	c	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	130	< 0.5
FC6	a	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	160	< 0.5
FC6	b	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	130	< 0.5
FC6	c	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	150	< 0.5
BB1	a	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB1	b	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB1	c	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB2	a	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB2	b	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
BB2	c	19970506	< 1	< 5	< 5	1	< 0.1	< 0.1	80	< 0.5
BB3	a	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB3	b	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20	< 0.5
BB3	c	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20	< 0.5
BB4	a	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB4	b	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
BB4	c	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB5	a	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB5	b	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB5	c	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
DI1	a	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100	< 0.5
DI1	b	19970507	< 1	< 5	< 5	1	< 0.1	< 0.1	100	< 0.5
DI1	c	19970507	< 1	< 5	< 5	1	< 0.1	< 0.1	100	< 0.5
DI2	a	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5
DI2	b	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
< 0.5	1.5	< 0.5	< 0.5	110	340	< 0.1	< 1	3060	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	110	330	< 0.1	< 1	2980	< 2	< 10	< 5
< 0.5	1.2	< 0.5	< 0.5	130	400	< 0.1	< 1	3560	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	100	300	< 0.1	< 1	2710	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	90	290	< 0.1	< 1	2660	< 2	< 10	< 5
< 0.5	0.7	< 0.5	< 0.5	100	310	< 0.1	< 1	2780	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	110	350	< 0.1	< 1	3140	< 2	< 10	< 5
< 0.5	1.6	< 0.5	< 0.5	120	360	0.2	< 1	3190	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	100	300	0.3	< 1	2670	< 2	< 10	< 5
< 0.5	1	< 0.5	< 0.5	140	450	0.3	< 1	4010	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	140	430	0.1	< 1	3860	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	130	400	< 0.1	< 1	3630	< 2	< 10	< 5
< 0.5	1.2	< 0.5	0.6	140	450	0.2	< 1	4010	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	140	430	0.1	< 1	3840	< 2	< 10	< 5
< 0.5	< 0.5	0.5	< 0.5	150	460	< 0.1	< 1	4090	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	60	180	0.1	< 1	1690	< 2	< 10	6
< 0.5	0.8	< 0.5	< 0.5	60	180	0.1	< 1	1600	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	110	< 0.1	< 1	1030	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	180	0.2	< 1	1660	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	70	200	< 0.1	< 1	1810	< 2	< 10	< 5
< 0.5	2.2	< 0.5	< 0.5	80	240	< 0.1	< 1	2170	< 2	< 10	< 5
< 0.5	1.6	0.5	< 0.5	30	70	< 0.1	< 1	640	< 2	< 10	< 5
< 0.5	0.6	0.6	< 0.5	20	40	< 0.1	< 1	380	< 2	< 10	< 5
0.8	< 0.5	0.8	1.2	20	40	0.2	< 1	340	< 2	< 10	< 5
0.7	1.1	< 0.5	< 0.5	70	200	0.1	< 1	1820	< 2	< 10	< 5
0.8	< 0.5	< 0.5	< 0.5	70	210	< 0.1	< 1	1910	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	70	210	< 0.1	< 1	1860	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	60	190	< 0.1	< 1	1690	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	70	190	0.2	< 1	1770	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	60	200	0.1	< 1	1810	< 2	< 10	< 5
< 0.5	0.9	< 0.5	< 0.5	100	320	< 0.1	< 1	2830	< 2	< 10	< 5
< 0.5	0.6	< 0.5	< 0.5	100	320	0.2	< 1	2830	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.6	100	320	0.2	< 1	2780	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	90	270	< 0.1	< 1	2410	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.7	90	280	0.2	< 1	2420	< 2	< 10	< 5

S	SB	SE	SI	SN	SR	TI	V	ZN
240	< 5	< 5	< 5	< 5	2.1	< 0.2	< 1	< 0.2
233	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
278	< 5	< 5	< 5	< 5	2.4	< 0.2	< 1	< 0.2
213	< 5	< 5	< 5	< 5	1.8	< 0.2	< 1	< 0.2
208	< 5	< 5	< 5	< 5	1.8	< 0.2	< 1	< 0.2
217	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
245	< 5	< 5	< 5	< 5	2.1	< 0.2	< 1	< 0.2
251	< 5	< 5	< 5	< 5	2.1	< 0.2	< 1	< 0.2
207	< 5	< 5	< 5	< 5	1.8	< 0.2	< 1	< 0.2
279	< 5	< 5	< 5	< 5	2.8	< 0.2	< 1	< 0.2
268	< 5	< 5	< 5	< 5	2.7	< 0.2	< 1	< 0.2
251	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	< 0.2
279	< 5	< 5	< 5	< 5	2.8	< 0.2	< 1	< 0.2
267	< 5	< 5	< 5	< 5	2.7	< 0.2	< 1	< 0.2
285	< 5	< 5	< 5	< 5	2.9	0.3	< 1	< 0.2
118	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
110	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
72	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
117	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
127	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
153	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
51	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	0.5
34	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	0.5
31	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	0.3
127	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
133	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	< 0.2
128	< 5	< 5	< 5	< 5	1.3	0.2	< 1	< 0.2
116	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
120	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
124	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
223	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
225	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
220	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
190	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	< 0.2
192	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
DI2	c	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5
DI3	a	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
DI3	b	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
DI3	c	19970507	< 1	< 5	< 5	1	< 0.1	< 0.1	80	0.5
DI4	a	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
DI4	b	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
DI4	c	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
DI5	a	19970507	< 1	< 5	< 5	1	< 0.1	< 0.1	60	< 0.5
DI5	b	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
DI5	c	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
SC1	a	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
SC1	b	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
SC1	c	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
SC2	a	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	10	< 0.5
SC2	b	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	10	< 0.5
SC2	c	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	10	< 0.5
SC3	a	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
SC3	b	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
SC3	c	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
SC4	a	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
SC4	b	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
SC4	c	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
SC5	a	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
SC5	b	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
SC5	c	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
SC6	a	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
SC6	b	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
SC6	c	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
WF1	a	19970509	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
WF1	b	19970509	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
WF1	c	19970509	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
FC1	a	19970520	< 1	< 5	< 5	1	< 0.1	< 0.1	90	< 0.5
FC1	b	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100	< 0.5
FC1	c	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5
FC2	a	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
< 0.5	< 0.5	< 0.5	< 0.5	100	280	< 0.1	< 1	2410	< 2	< 10	< 5
0.7	< 0.5	< 0.5	< 0.5	80	250	0.3	< 1	2210	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.7	80	250	< 0.1	< 1	2260	< 2	< 10	< 5
0.5	< 0.5	< 0.5	< 0.5	90	250	0.4	< 1	2210	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	80	260	0.2	< 1	2240	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	80	260	0.1	< 1	2220	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	80	240	0.2	< 1	2050	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	70	200	< 0.1	< 1	1750	< 2	< 10	< 5
1	< 0.5	< 0.5	< 0.5	60	190	0.1	< 1	1660	< 2	< 10	< 5
0.6	< 0.5	< 0.5	< 0.5	60	200	0.1	< 1	1750	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	30	80	< 0.1	< 1	720	< 2	< 10	< 5
0.6	< 0.5	< 0.5	< 0.5	30	90	0.1	< 1	760	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	1.2	40	100	0.1	< 1	860	< 2	< 10	< 5
0.6	< 0.5	< 0.5	< 0.5	20	30	< 0.1	< 1	280	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	20	40	< 0.1	< 1	280	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	20	40	0.1	< 1	330	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	150	< 0.1	< 1	1360	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	150	0.1	< 1	1380	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	150	< 0.1	< 1	1340	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	60	180	< 0.1	< 1	1630	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	60	190	0.1	< 1	1650	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	60	200	< 0.1	< 1	1760	< 2	< 10	< 5
< 0.5	1	< 0.5	< 0.5	50	170	< 0.1	< 1	1500	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.6	60	170	< 0.1	< 1	1530	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	170	< 0.1	< 1	1510	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.6	40	140	< 0.1	< 1	1220	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	130	0.1	< 1	1140	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	140	0.2	< 1	1220	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	130	< 0.1	< 1	1130	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	130	< 0.1	< 1	1140	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	140	< 0.1	< 1	1200	< 2	< 10	< 5
0.7	< 0.5	< 0.5	< 0.5	100	310	< 0.1	< 1	2620	< 2	< 10	< 5
0.6	< 0.5	< 0.5	< 0.5	100	320	< 0.1	< 1	2730	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	90	290	< 0.1	< 1	2530	< 2	< 10	< 5
0.9	< 0.5	< 0.5	< 0.5	80	270	< 0.1	< 1	2360	< 2	< 10	< 5

S	SB	SE	SI	SN	SR	TI	V	ZN
191	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	< 0.2
170	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
175	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
167	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
173	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
171	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
160	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
136	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	< 0.2
128	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
135	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	< 0.2
56	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	< 0.2
58	< 5	< 5	< 5	< 5	0.5	0.3	< 1	< 0.2
65	< 5	< 5	< 5	< 5	0.6	0.5	< 1	< 0.2
22	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
22	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
26	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
102	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
102	< 5	< 5	< 5	< 5	0.9	0.2	< 1	< 0.2
97	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
123	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	1
123	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
134	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	0.2
115	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
120	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	2.5
117	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
95	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	3.5
89	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	< 0.2
92	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	< 0.2
83	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	< 0.2
84	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	< 0.2
88	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
204	< 5	< 5	< 5	< 5	1.8	< 0.2	< 1	0.3
213	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
198	< 5	< 5	< 5	< 5	1.8	< 0.2	< 1	< 0.2
183	< 5	≤ 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
FC2	b	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
FC2	c	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
FC3	a	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20	< 0.5
FC3	b	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
FC3	c	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
FC4	a	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
FC4	b	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
FC4	c	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
FC5	a	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
FC5	b	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
FC5	c	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
FC6	a	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5
FC6	b	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5
FC6	c	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5
BB1	a	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB1	b	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB1	c	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB2	a	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100	< 0.5
BB2	b	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100	< 0.5
BB2	c	19970521	< 1	< 5	< 5	1	< 0.1	< 0.1	110	< 0.5
BB3	a	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
BB3	b	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB3	c	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
BB4	a	19970521	< 1	< 5	< 5	1	< 0.1	< 0.1	100	< 0.5
BB4	b	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	110	< 0.5
BB4	c	19970521	< 1	< 5	< 5	2	< 0.1	< 0.1	100	< 0.5
BB5	a	19970521	< 1	< 5	< 5	1	< 0.1	< 0.1	130	< 0.5
BB5	b	19970521	< 1	< 5	< 5	1	< 0.1	< 0.1	120	< 0.5
BB5	c	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	120	< 0.5
SC1	a	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
SC1	b	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
SC1	c	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
SC2	a	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	10	< 0.5
SC2	b	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10	< 0.5
SC2	c	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	10	< 0.5

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
0.8	< 0.5	< 0.5	< 0.5	80	270	< 0.1	< 1	2320	< 2	< 10	< 5
< 0.5	< 0.5	0.8	< 0.5	80	270	< 0.1	< 1	2340	< 2	< 10	< 5
< 0.5	< 0.5	1.9	< 0.5	20	80	< 0.1	< 1	650	< 2	< 10	< 5
< 0.5	< 0.5	0.9	< 0.5	30	90	< 0.1	< 1	790	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	30	110	< 0.1	< 1	930	< 2	< 10	< 5
< 0.5	< 0.5	0.9	< 0.5	30	110	< 0.1	< 1	980	< 2	< 10	< 5
< 0.5	< 0.5	0.9	0.8	30	100	< 0.1	< 1	920	< 2	< 10	< 5
< 0.5	< 0.5	0.9	< 0.5	30	100	< 0.1	< 1	910	< 2	< 10	< 5
< 0.5	< 0.5	0.6	< 0.5	50	190	< 0.1	< 1	1720	< 2	< 10	< 5
< 0.5	< 0.5	0.7	0.5	50	180	< 0.1	< 1	1590	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.6	50	170	0.1	< 1	1510	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.8	90	270	0.3	< 1	2370	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	90	290	0.1	< 1	2510	< 2	< 10	< 5
< 0.5	1.2	< 0.5	< 0.5	90	290	< 0.1	< 1	2450	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	110	< 0.1	< 1	990	< 2	< 10	< 5
< 0.5	0.6	0.8	< 0.5	40	100	< 0.1	< 1	900	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	100	0.1	< 1	910	< 2	< 10	< 5
< 0.5	0.7	1.9	< 0.5	110	340	< 0.1	< 1	2900	< 2	< 10	< 5
< 0.5	< 0.5	0.8	< 0.5	100	330	0.1	< 1	2900	< 2	< 10	< 5
< 0.5	1.5	0.6	< 0.5	100	350	< 0.1	< 1	3070	< 2	< 10	< 5
< 0.5	1.3	2	< 0.5	20	90	< 0.1	< 1	810	< 2	< 10	< 5
1.3	2.2	2.4	< 0.5	< 10	80	< 0.1	< 1	660	< 2	< 10	< 5
0.9	2.5	2.2	< 0.5	30	120	0.1	< 1	1000	< 2	< 10	< 5
0.8	1	< 0.5	< 0.5	90	330	< 0.1	< 1	2890	< 2	< 10	< 5
< 0.5	2.1	< 0.5	< 0.5	100	360	< 0.1	< 1	3090	< 2	< 10	< 5
< 0.5	2.6	1.1	< 0.5	110	330	< 0.1	< 1	2820	< 2	< 10	< 5
< 0.5	1.1	0.6	0.5	130	420	< 0.1	< 1	3560	< 2	< 10	5
< 0.5	2.4	< 0.5	< 0.5	130	420	0.1	< 1	3530	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	130	410	< 0.1	< 1	3490	< 2	< 10	< 5
< 0.5	< 0.5	0.7	< 0.5	40	100	< 0.1	< 1	860	< 2	< 10	< 5
< 0.5	< 0.5	0.6	< 0.5	40	100	0.1	< 1	900	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.9	30	100	0.1	< 1	840	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	10	30	< 0.1	< 1	290	< 2	< 10	< 5
< 0.5	< 0.5	0.6	< 0.5	10	30	< 0.1	< 1	250	< 2	< 10	< 5
< 0.5	< 0.5	0.5	< 0.5	20	40	0.1	< 1	340	< 2	< 10	< 5

S	SB	SE	SI	SN	SR	TI	V	ZN
180	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	0.8
180	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
50	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
60	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
71	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
75	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	< 0.2
71	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
70	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
135	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
122	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	0.3
117	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
185	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	0.2
184	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	< 0.2
182	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	0.3
82	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	0.3
74	< 5	5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
73	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
247	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
248	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
253	< 5	< 5	< 5	< 5	2.1	< 0.2	< 1	< 0.2
82	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	1.6
69	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	1.3
96	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	1.5
241	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
257	< 5	< 5	< 5	< 5	2.1	< 0.2	< 1	< 0.2
235	< 5	< 5	< 5	< 5	2.1	0.3	< 1	< 0.2
296	< 5	< 5	< 5	< 5	2.6	0.3	< 1	< 0.2
293	< 5	< 5	< 5	< 5	2.6	< 0.2	< 1	0.6
290	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	0.5
65	< 5	< 5	< 5	< 5	0.6	0.2	< 1	< 0.2
67	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
63	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	< 0.2
24	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
21	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
29	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
SC3	a	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
SC3	b	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
SC3	c	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
WF1	a	19970526	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20	< 0.5
WF1	b	19970526	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20	< 0.5
WF1	c	19970526	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20	< 0.5
DI1	a	19970527	< 1	< 5	< 5	1	0.1	< 0.1	140	< 0.5
DI1	b	19970527	< 1	< 5	< 5	1	< 0.1	< 0.1	130	< 0.5
DI1	c	19970527	< 1	< 5	< 5	1	< 0.1	< 0.1	140	< 0.5
DI2	a	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	120	< 0.5
DI2	b	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	130	< 0.5
DI2	c	19970527	< 1	< 5	< 5	1	< 0.1	< 0.1	130	< 0.5
DI3	a	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	110	< 0.5
DI3	b	19970527	< 1	< 5	< 5	1	< 0.1	< 0.1	90	< 0.5
DI3	c	19970527	< 1	< 5	< 5	< 1	0.1	< 0.1	80	< 0.5
DI4	a	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
DI4	b	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20	< 0.5
DI4	c	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
DI5	a	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	110	< 0.5
DI5	b	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100	< 0.5
DI5	c	19970527	< 1	< 5	< 5	1	0.1	< 0.1	100	< 0.5
FC1	a	19970604	< 0.1	< 0.5	< 0.5	1.3	< 0.01	< 0.01	70	< 0.05
FC1	b	19970604	< 0.1	0.6	< 0.5	1.1	< 0.01	< 0.01	66	< 0.05
FC1	c	19970604	0.1	1.2	< 0.5	1.3	0.05	< 0.01	65	0.05
FC2	a	19970604	< 0.1	< 0.5	< 0.5	1.2	< 0.01	< 0.01	55	< 0.05
FC2	b	19970604	< 0.1	< 0.5	< 0.5	1.3	< 0.01	< 0.01	63	< 0.05
FC2	c	19970604	< 0.1	< 0.5	< 0.5	1.2	< 0.01	< 0.01	61	< 0.05
FC3	a	19970604	< 0.1	< 0.5	< 0.5	0.4	< 0.01	< 0.01	9	< 0.05
FC3	b	19970604	< 0.1	< 0.5	< 0.5	0.3	< 0.01	< 0.01	7	< 0.05
FC3	c	19970604	< 0.1	< 0.5	< 0.5	0.5	0.01	< 0.01	15	< 0.05
FC4	a	19970604	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	44	< 0.05
FC4	b	19970604	< 0.1	< 0.5	< 0.5	1	0.02	< 0.01	45	< 0.05
FC4	c	19970604	< 0.1	0.5	< 0.5	0.8	< 0.01	< 0.01	36	< 0.05
FC5	a	19970604	< 0.1	< 0.5	< 0.5	0.9	0.01	< 0.01	51	< 0.05
FC5	b	19970604	< 0.1	< 0.5	< 0.5	0.8	< 0.01	< 0.01	53	< 0.05
FC5	c	19970604	< 0.1	< 0.5	< 0.5	0.9	0.01	< 0.01	46	< 0.05

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
< 0.5	< 0.5	< 0.5	< 0.5	60	180	< 0.1	< 1	1490	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	160	0.1	< 1	1410	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	170	< 0.1	< 1	1480	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	30	60	0.1	< 1	530	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	20	60	< 0.1	< 1	550	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	20	60	< 0.1	< 1	550	< 2	< 10	< 5
< 0.5	< 0.5	0.6	< 0.5	150	470	< 0.1	< 1	3940	< 2	< 10	< 5
0.6	< 0.5	< 0.5	< 0.5	130	440	< 0.1	< 1	3800	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	130	450	< 0.1	< 1	3860	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.6	120	400	< 0.1	< 1	3390	< 2	< 10	< 5
< 0.5	0.6	< 0.5	< 0.5	120	410	< 0.1	< 1	3510	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	110	410	< 0.1	< 1	3580	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	90	360	< 0.1	< 1	3090	< 2	< 10	< 5
< 0.5	0.6	0.6	< 0.5	80	280	< 0.1	< 1	2470	< 2	< 10	< 5
< 0.5	2.2	0.6	< 0.5	90	270	< 0.1	< 1	2350	< 2	< 10	< 5
< 0.5	0.5	< 0.5	0.6	40	120	< 0.1	< 1	1030	< 2	< 10	< 5
< 0.5	0.7	< 0.5	< 0.5	30	70	0.2	< 1	630	< 2	< 10	< 5
< 0.5	0.6	< 0.5	< 0.5	50	160	< 0.1	< 1	1330	< 2	< 10	< 5
< 0.5	0.9	< 0.5	< 0.5	120	360	< 0.1	< 1	3140	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	100	320	0.2	< 1	2790	< 2	< 10	< 5
< 0.5	< 0.5	0.6	< 0.5	120	330	0.2	< 1	2850	< 2	< 10	< 5
< 0.05	< 0.05	0.14	< 0.05	71	214	< 0.01	< 0.1	1810	< 0.2	< 1	< 0.5
< 0.05	0.1	0.13	< 0.05	68	200	< 0.01	< 0.1	1690	< 0.2	< 1	< 0.5
0.16	0.16	0.33	0.08	69	196	0.02	< 0.1	1620	0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	0.05	55	161	< 0.01	< 0.1	1370	< 0.2	< 1	< 0.5
0.06	0.08	0.28	< 0.05	64	187	0.01	< 0.1	1580	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.14	< 0.05	61	179	< 0.01	< 0.1	1520	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	< 0.05	10	23	< 0.01	< 0.1	224	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	< 0.05	7	17	< 0.01	< 0.1	164	< 0.2	< 1	< 0.5
0.05	< 0.05	0.15	< 0.05	15	38	< 0.01	< 0.1	327	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.07	< 0.05	47	127	< 0.01	< 0.1	1140	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.14	0.18	49	137	0.02	< 0.1	1230	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.09	0.05	41	111	0.01	< 0.1	1020	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.16	0.06	54	157	< 0.01	< 0.1	1350	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.13	0.06	57	164	< 0.01	< 0.1	1410	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.18	0.08	48	139	< 0.01	< 0.1	1190	< 0.2	< 1	< 0.5

S	SB	SE	SI	SN	SR	TI	V	ZN
115	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
107	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
112	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
42	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
43	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
40	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
324	< 5	< 5	< 5	< 5	2.8	< 0.2	< 1	< 0.2
310	< 5	< 5	< 5	< 5	2.6	< 0.2	< 1	< 0.2
314	< 5	< 5	< 5	< 5	2.6	< 0.2	< 1	< 0.2
280	< 5	< 5	< 5	< 5	2.4	< 0.2	< 1	< 0.2
289	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	< 0.2
297	< 5	< 5	< 5	< 5	2.4	< 0.2	< 1	< 0.2
255	< 5	< 5	< 5	< 5	2.2	< 0.2	< 1	0.3
204	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	< 0.2
200	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	0.2
90	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	0.4
55	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
114	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
268	< 5	< 5	< 5	< 5	2.2	< 0.2	< 1	< 0.2
238	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
242	< 5	< 5	< 5	< 5	2.1	< 0.2	< 1	< 0.2
153	< 0.5	< 0.5	1.9	< 0.5	1.35	< 0.02	< 0.1	0.03
144	< 0.5	< 0.5	1.6	< 0.5	1.26	< 0.02	< 0.1	0.02
140	< 0.5	0.9	2.6	< 0.5	1.24	0.15	0.2	0.04
120	< 0.5	< 0.5	2.2	< 0.5	1.02	< 0.02	< 0.1	< 0.02
138	< 0.5	< 0.5	2.6	< 0.5	1.18	< 0.02	< 0.1	0.03
134	< 0.5	< 0.5	2	< 0.5	1.13	< 0.02	< 0.1	< 0.02
18.7	< 0.5	< 0.5	2.5	< 0.5	0.14	< 0.02	< 0.1	< 0.02
13.9	< 0.5	< 0.5	2	< 0.5	0.11	< 0.02	< 0.1	< 0.02
28.5	< 0.5	< 0.5	2.6	< 0.5	0.25	0.02	< 0.1	0.04
101	< 0.5	< 0.5	3.7	< 0.5	0.78	< 0.02	< 0.1	< 0.02
106	< 0.5	< 0.5	4.6	< 0.5	0.84	< 0.02	< 0.1	0.04
86.8	< 0.5	< 0.5	4.2	< 0.5	0.67	< 0.02	< 0.1	< 0.02
117	< 0.5	< 0.5	2.4	< 0.5	0.97	< 0.02	< 0.1	0.03
124	< 0.5	< 0.5	2.4	< 0.5	1.01	< 0.02	< 0.1	0.04
105	< 0.5	< 0.5	1.9	< 0.5	0.86	0.04	< 0.1	< 0.02

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
FC6	a	19970604	< 0.1	< 0.5	< 0.5	1	< 0.01	< 0.01	59	< 0.05
FC6	b	19970604	< 0.1	< 0.5	< 0.5	0.9	< 0.01	< 0.01	49	< 0.05
FC6	c	19970604	< 0.1	0.5	< 0.5	0.9	< 0.01	< 0.01	57	< 0.05
BB1	a	19970605	< 0.1	< 0.5	< 0.5	0.5	0.01	< 0.01	26	< 0.05
BB1	b	19970605	< 0.1	< 0.5	< 0.5	0.6	0.01	< 0.01	28	< 0.05
BB1	c	19970605	< 0.1	< 0.5	< 0.5	0.4	< 0.01	< 0.01	13	< 0.05
BB2	a	19970605	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	42	< 0.05
BB2	b	19970605	< 0.1	< 0.5	< 0.5	0.8	0.02	< 0.01	39	< 0.05
BB2	c	19970605	< 0.1	< 0.5	< 0.5	0.8	0.02	< 0.01	47	< 0.05
BB3	a	19970605	< 0.1	1	< 0.5	0.6	0.01	< 0.01	39	< 0.05
BB3	b	19970605	< 0.1	0.8	< 0.5	0.6	< 0.01	< 0.01	44	< 0.05
BB3	c	19970605	< 0.1	1	< 0.5	0.7	< 0.01	< 0.01	41	< 0.05
BB4	a	19970605	< 0.1	< 0.5	< 0.5	0.6	0.01	< 0.01	27	< 0.05
BB4	b	19970605	< 0.1	< 0.5	< 0.5	0.7	0.02	< 0.01	42	0.06
BB4	c	19970605	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	41	< 0.05
BB5	a	19970605	< 0.1	< 0.5	< 0.5	0.9	0.02	< 0.01	46	< 0.05
BB5	b	19970605	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	34	< 0.05
BB5	c	19970605	< 0.1	0.6	< 0.5	0.8	0.04	< 0.01	37	< 0.05
DI1	a	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
DI1	b	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
DI1	c	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
DI2	a	19970606	< 1	< 5	< 5	1	< 0.1	< 0.1	80	< 0.5
DI2	b	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
DI2	c	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
DI3	a	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
DI3	b	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
DI3	c	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
DI4	a	19970606	< 1	< 5	< 5	1	0.3	< 0.1	80	< 0.5
DI4	b	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5
DI4	c	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
DI5	a	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90	< 0.5
DI5	b	19970606	< 1	< 5	< 5	1	< 0.1	< 0.1	80	< 0.5
DI5	c	19970606	< 1	< 5	< 5	1	< 0.1	< 0.1	80	< 0.5
BB1	a	19970620	< 0.1	< 0.5	< 0.5	0.4	< 0.01	< 0.01	17	< 0.05
BB1	b	19970620	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	24	< 0.05

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
< 0.05	< 0.05	0.15	0.06	60	181	< 0.01	< 0.1	1530	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.05	< 0.05	51	151	< 0.01	< 0.1	1280	< 0.2	< 1	< 0.5
< 0.05	0.06	< 0.05	< 0.05	59	172	< 0.01	< 0.1	1450	< 0.2	< 1	< 0.5
< 0.05	0.1	0.16	0.1	25	74	< 0.01	< 0.1	630	< 0.2	< 1	< 0.5
< 0.05	0.06	0.11	< 0.05	26	79	< 0.01	< 0.1	680	< 0.2	< 1	< 0.5
< 0.05	0.14	0.18	0.24	13	37	< 0.01	< 0.1	336	< 0.2	< 1	< 0.5
< 0.05	0.06	0.23	< 0.05	39	117	0.02	< 0.1	997	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.43	< 0.05	36	110	0.03	< 0.1	928	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.43	0.13	47	141	0.03	< 0.1	1180	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.73	< 0.05	32	97	0.1	< 0.1	810	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.8	< 0.05	36	108	0.14	< 0.1	897	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.78	0.08	34	103	0.11	< 0.1	868	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.88	< 0.05	26	71	0.04	< 0.1	615	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.46	0.36	40	119	0.03	< 0.1	1020	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.42	< 0.05	40	122	0.04	< 0.1	1030	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.29	< 0.05	46	134	< 0.01	< 0.1	1140	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.26	< 0.05	34	97	0.01	< 0.1	832	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.33	< 0.05	37	104	0.03	< 0.1	887	< 0.2	< 1	< 0.5
< 0.5	< 0.5	< 0.5	< 0.5	70	240	0.1	< 1	2190	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	80	270	< 0.1	< 1	2320	< 2	< 10	< 5
< 0.5	< 0.5	1.7	< 0.5	80	260	< 0.1	< 1	2220	< 2	< 10	< 5
0.6	< 0.5	1.2	< 0.5	80	250	< 0.1	< 1	2180	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	80	260	< 0.1	< 1	2270	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	70	230	0.2	< 1	2050	< 2	< 10	< 5
< 0.5	0.6	0.9	< 0.5	50	150	< 0.1	< 1	1360	< 2	< 10	< 5
< 0.5	1.1	1.1	< 0.5	50	150	< 0.1	< 1	1360	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	30	120	0.2	< 1	1140	< 2	< 10	< 5
1	< 0.5	1.6	< 0.5	100	260	0.2	< 1	2170	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	100	300	< 0.1	< 1	2650	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	70	230	< 0.1	< 1	2010	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	90	290	< 0.1	< 1	2580	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	80	270	< 0.1	< 1	2350	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	70	260	< 0.1	< 1	2330	< 2	< 10	< 5
< 0.05	0.08	0.16	0.06	16	47	0.01	< 0.1	431	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.15	0.05	23	70	0.02	< 0.1	622	< 0.2	< 1	< 0.5

S	SB	SE	SI	SN	SR	TI	V	ZN
136	< 0.5	< 0.5	1.4	< 0.5	1.13	< 0.02	< 0.1	0.05
112	< 0.5	< 0.5	1.3	< 0.5	0.94	< 0.02	< 0.1	0.03
132	< 0.5	< 0.5	1.8	< 0.5	1.07	< 0.02	0.1	< 0.02
57.7	< 0.5	< 0.5	1.6	< 0.5	0.47	0.02	< 0.1	0.04
62.4	< 0.5	< 0.5	1.6	< 0.5	0.5	< 0.02	< 0.1	< 0.02
30.6	< 0.5	< 0.5	1.8	< 0.5	0.23	< 0.02	< 0.1	0.05
94.1	< 0.5	< 0.5	1.5	< 0.5	0.74	< 0.02	< 0.1	0.18
87.3	< 0.5	< 0.5	1.6	< 0.5	0.69	< 0.02	< 0.1	0.2
106	< 0.5	< 0.5	1.8	< 0.5	0.87	< 0.02	< 0.1	0.21
86.6	0.5	< 0.5	4.6	< 0.5	0.63	< 0.02	< 0.1	0.52
96.3	< 0.5	0.6	5.1	< 0.5	0.7	< 0.02	< 0.1	0.58
92.7	< 0.5	< 0.5	5.5	< 0.5	0.67	< 0.02	< 0.1	0.56
59.4	< 0.5	< 0.5	3.9	< 0.5	0.44	< 0.02	< 0.1	0.48
91.1	< 0.5	0.6	2.2	< 0.5	0.75	0.02	< 0.1	0.22
92.9	< 0.5	< 0.5	2	< 0.5	0.76	< 0.02	< 0.1	0.22
101	< 0.5	< 0.5	2.1	< 0.5	0.85	< 0.02	< 0.1	0.12
74.3	< 0.5	< 0.5	2.4	< 0.5	0.61	< 0.02	< 0.1	0.06
80	< 0.5	< 0.5	1.9	< 0.5	0.66	< 0.02	< 0.1	0.09
180	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
185	< 5	6	< 5	< 5	1.7	< 0.2	< 1	< 0.2
177	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
175	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
180	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
170	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
105	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
106	< 5	< 5	< 5	< 5	0.9	0.2	< 1	< 0.2
88	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	< 0.2
177	5	5	6	< 5	1.6	1.1	< 1	< 0.2
211	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
162	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	< 0.2
207	< 5	< 5	< 5	< 5	1.8	< 0.2	< 1	< 0.2
195	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
193	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	1.4
35.3	< 0.5	0.5	3.3	< 0.5	0.31	< 0.02	0.1	0.06
49.6	0.5	< 0.5	2.1	< 0.5	0.45	< 0.02	< 0.1	0.1

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
BB1	c	19970620	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	20	< 0.05
BB2	a	19970620	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	27	< 0.05
BB2	b	19970620	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	28	< 0.05
BB2	c	19970620	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	25	< 0.05
BB3	a	19970620	< 0.1	< 0.5	< 0.5	0.5	< 0.01	< 0.01	22	< 0.05
BB3	b	19970620	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	24	< 0.05
BB3	c	19970620	< 0.1	< 0.5	< 0.5	0.5	0.03	< 0.01	23	< 0.05
BB4	a	19970620	< 0.1	< 0.5	< 0.5	0.8	< 0.01	< 0.01	26	< 0.05
BB4	b	19970620	< 0.1	< 0.5	< 0.5	0.6	0.02	< 0.01	24	< 0.05
BB4	c	19970620	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	25	< 0.05
BB5	a	19970620	< 0.1	< 0.5	< 0.5	0.8	< 0.01	< 0.01	24	< 0.05
BB5	b	19970620	< 0.1	< 0.5	< 0.5	0.7	0.04	< 0.01	27	< 0.05
BB5	c	19970620	< 0.1	< 0.5	< 0.5	0.6	0.04	< 0.01	25	< 0.05
BB1	a	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	150	< 0.5
BB1	b	19970704	< 1	< 5	< 5	2	< 0.1	< 0.1	150	< 0.5
BB1	c	19970704	< 1	< 5	< 5	2	< 0.1	< 0.1	150	< 0.5
BB2	a	19970704	< 1	< 5	< 5	1	< 0.1	< 0.1	160	< 0.5
BB2	b	19970704	< 1	< 5	< 5	2	< 0.1	< 0.1	180	< 0.5
BB2	c	19970704	< 1	< 5	< 5	1	< 0.1	< 0.1	150	< 0.5
BB3	a	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
BB3	b	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
BB3	c	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
BB4	a	19970704	< 1	< 5	< 5	2	< 0.1	< 0.1	140	< 0.5
BB4	b	19970704	< 1	< 5	< 5	2	< 0.1	< 0.1	150	< 0.5
BB4	c	19970704	< 1	< 5	< 5	2	< 0.1	< 0.1	150	< 0.5
BB5	a	19970704	< 1	< 5	< 5	2	< 0.1	< 0.1	160	< 0.5
BB5	b	19970704	< 1	< 5	< 5	2	0.1	< 0.1	160	< 0.5
BB5	c	19970704	< 1	< 5	< 5	2	< 0.1	< 0.1	150	< 0.5
BB1	a	19970717	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	13	< 0.05
BB1	b	19970717	< 0.1	< 0.5	< 0.5	0.4	< 0.01	< 0.01	15	< 0.05
BB1	c	19970717	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	14	< 0.05
BB2	a	19970717	< 0.1	< 0.5	< 0.5	0.5	0.02	< 0.01	20	< 0.05
BB2	b	19970717	< 0.1	0.6	< 0.5	0.6	0.02	< 0.01	17	< 0.05
BB2	c	19970717	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	21	< 0.05
BB3	a	19970717	< 0.01	0.3	< 0.05	0.01	0.004	< 0.001	6.5	0.006

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
< 0.05	< 0.05	0.12	0.1	20	60	0.02	< 0.1	576	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	< 0.05	24	78	0.02	< 0.1	697	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.07	< 0.05	26	83	0.03	< 0.1	736	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	0.06	22	73	0.03	< 0.1	640	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.39	0.06	16	56	0.05	< 0.1	480	< 0.2	< 1	< 0.5
0.08	< 0.05	0.43	< 0.05	17	57	0.05	< 0.1	493	< 0.2	< 1	< 0.5
< 0.05	0.09	0.38	< 0.05	17	57	0.04	< 0.1	495	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.16	0.07	23	75	0.02	< 0.1	667	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.15	< 0.05	22	70	< 0.01	< 0.1	619	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.16	< 0.05	22	72	0.02	< 0.1	638	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.2	< 0.05	22	71	0.01	< 0.1	622	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.14	0.11	23	76	< 0.01	< 0.1	667	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.2	0.06	24	75	0.02	< 0.1	649	< 0.2	< 1	< 0.5
< 0.5	< 0.5	< 0.5	< 0.5	150	460	< 0.1	< 1	3870	< 2	< 10	< 5
< 0.5	< 0.5	0.8	0.8	150	460	< 0.1	< 1	3890	< 2	< 10	< 5
< 0.5	< 0.5	0.9	< 0.5	140	470	< 0.1	< 1	4020	< 2	< 10	< 5
< 0.5	< 0.5	1.4	0.7	170	490	< 0.1	< 1	4150	< 2	< 10	< 5
< 0.5	0.8	0.6	< 0.5	170	510	< 0.1	< 1	4300	< 2	< 10	< 5
< 0.5	< 0.5	1	< 0.5	150	480	< 0.1	< 1	4040	< 2	< 10	< 5
< 0.5	< 0.5	2	< 0.5	40	130	0.1	< 1	1080	< 2	< 10	< 5
< 0.5	< 0.5	0.6	< 0.5	40	140	0.1	< 1	1170	< 2	< 10	< 5
< 0.5	< 0.5	1.6	< 0.5	20	100	< 0.1	< 1	770	< 2	< 10	< 5
0.6	0.8	< 0.5	< 0.5	140	450	0.2	< 1	3780	< 2	< 10	< 5
< 0.5	< 0.5	0.6	0.7	130	450	0.1	< 1	3780	< 2	< 10	< 5
< 0.5	< 0.5	0.6	1.3	130	450	0.2	< 1	3790	< 2	< 10	< 5
< 0.5	< 0.5	0.7	< 0.5	140	510	0.2	< 1	4270	< 2	< 10	< 5
0.7	< 0.5	0.8	< 0.5	170	510	< 0.1	< 1	4270	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	140	470	0.2	< 1	4000	< 2	< 10	< 5
< 0.05	< 0.05	< 0.05	< 0.05	16	36	< 0.01	< 0.1	316	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	0.1	16	40	< 0.01	< 0.1	341	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	< 0.05	13	39	< 0.01	< 0.1	327	< 0.2	< 1	< 0.5
< 0.05	0.09	< 0.05	< 0.05	23	57	0.01	< 0.1	490	< 0.2	< 1	< 0.5
< 0.05	0.1	0.08	0.06	19	47	0.01	< 0.1	396	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	< 0.05	15	60	< 0.01	< 0.1	507	< 0.2	< 1	< 0.5
< 0.005	< 0.005	1.11	0.091	1.5	5.1	0.069	< 0.01	33.1	< 0.02	< 0.1	< 0.05

S	SB	SE	SI	SN	SR	TI	V	ZN
45.8	< 0.5	< 0.5	2.4	< 0.5	0.38	< 0.02	< 0.1	0.17
56.2	< 0.5	< 0.5	1.7	< 0.5	0.49	< 0.02	< 0.1	< 0.02
59.1	< 0.5	< 0.5	2	< 0.5	0.52	< 0.02	< 0.1	0.05
51.8	< 0.5	< 0.5	1.5	< 0.5	0.45	< 0.02	< 0.1	0.05
44.7	< 0.5	< 0.5	2.2	< 0.5	0.35	< 0.02	< 0.1	0.28
46.2	< 0.5	< 0.5	2.6	< 0.5	0.37	< 0.02	< 0.1	0.32
46.5	< 0.5	< 0.5	2.6	< 0.5	0.37	< 0.02	< 0.1	0.31
55.5	< 0.5	< 0.5	2.3	< 0.5	0.46	< 0.02	< 0.1	0.12
51.1	< 0.5	< 0.5	2	< 0.5	0.43	< 0.02	< 0.1	0.11
54.4	< 0.5	< 0.5	2.9	< 0.5	0.44	< 0.02	< 0.1	0.12
51	< 0.5	< 0.5	2.2	< 0.5	0.43	< 0.02	< 0.1	0.11
54.4	< 0.5	< 0.5	2	< 0.5	0.49	< 0.02	< 0.1	0.15
53	< 0.5	< 0.5	1.7	< 0.5	0.48	0.05	< 0.1	0.15
323	< 5	< 5	< 5	< 5	2.9	< 0.2	< 1	0.3
326	< 5	< 5	< 5	< 5	2.9	< 0.2	< 1	0.4
338	< 5	< 5	< 5	< 5	2.9	0.2	< 1	< 0.2
350	< 5	< 5	< 5	< 5	3.1	< 0.2	< 1	0.2
364	< 5	< 5	< 5	< 5	3.2	< 0.2	< 1	1.9
338	< 5	< 5	< 5	< 5	3	0.3	< 1	< 0.2
101	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	0.6
109	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	0.6
75	< 5	< 5	< 5	< 5	0.6	0.2	< 1	0.8
315	< 5	< 5	< 5	< 5	2.8	< 0.2	< 1	< 0.2
317	< 5	< 5	< 5	< 5	2.9	< 0.2	< 1	< 0.2
315	< 5	< 5	< 5	< 5	3	0.4	< 1	< 0.2
358	< 5	< 5	< 5	< 5	3.3	< 0.2	< 1	< 0.2
355	< 5	< 5	< 5	< 5	3.2	< 0.2	< 1	< 0.2
334	< 5	< 5	< 5	< 5	3	< 0.2	< 1	0.4
27.3	< 0.5	< 0.5	2.1	< 0.5	0.23	< 0.02	< 0.1	0.03
29.3	< 0.5	< 0.5	1.5	< 0.5	0.25	< 0.02	< 0.1	< 0.02
28.1	< 0.5	< 0.5	1.9	< 0.5	0.24	< 0.02	< 0.1	0.03
42.9	< 0.5	< 0.5	2.2	< 0.5	0.36	< 0.02	< 0.1	0.04
34.7	< 0.5	< 0.5	2.3	< 0.5	0.3	< 0.02	< 0.1	0.03
44.1	< 0.5	0.7	1.9	< 0.5	0.39	< 0.02	< 0.1	0.03
10.4	< 0.05	< 0.05	2.26	< 0.05	0.044	< 0.002	< 0.01	0.611

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
BB3	b	19970717	< 0.01	0.27	< 0.05	< 0.01	0.004	< 0.001	6	< 0.005
BB3	c	19970717	< 0.01	0.86	< 0.05	0.02	0.009	< 0.001	6.8	< 0.005
BB4	a	19970717	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	16	< 0.05
BB4	b	19970717	< 0.1	< 0.5	< 0.5	0.4	< 0.01	< 0.01	16	< 0.05
BB4	c	19970717	< 0.1	< 0.5	< 0.5	0.5	< 0.01	< 0.01	15	< 0.05
BB5	a	19970717	< 0.1	< 0.5	< 0.5	0.5	0.01	< 0.01	22	< 0.05
BB5	b	19970717	< 0.1	< 0.5	< 0.5	0.5	< 0.01	< 0.01	22	< 0.05
BB5	c	19970717	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	22	< 0.05
BB1	a	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB1	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB1	c	19970801	< 1	< 5	< 5	1	< 0.1	< 0.1	60	< 0.5
BB2	a	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
BB2	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
BB2	c	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
BB3	a	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50	< 0.5
BB3	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB3	c	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40	< 0.5
BB4	a	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB4	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB4	c	19970801	< 1	8	< 5	< 1	< 0.1	< 0.1	60	< 0.5
BB5	a	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80	< 0.5
BB5	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
BB5	c	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70	< 0.5
BB1	a	19970814	< 1	5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB1	b	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB1	c	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB2	a	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB2	b	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB2	c	19970814	< 1	< 5	< 5	< 1	< 0.1	0.1	30	< 0.5
BB3	a	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB3	b	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB3	c	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB4	a	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB4	b	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB4	c	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
0.009	0.006	1.16	0.072	1.1	3.5	0.069	< 0.01	19	< 0.02	< 0.1	< 0.05
< 0.005	< 0.005	1.14	0.481	1.8	6	0.071	< 0.01	39.9	< 0.02	< 0.1	< 0.05
< 0.05	< 0.05	0.18	< 0.05	9	40	0.01	< 0.1	333	< 0.2	< 1	< 0.5
< 0.05	< 0.05	0.19	0.09	11	41	0.01	< 0.1	338	< 0.2	< 1	< 0.5
< 0.05	0.06	0.22	0.06	8	37	0.02	< 0.1	307	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	0.14	11	63	< 0.01	< 0.1	519	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	0.07	19	64	< 0.01	< 0.1	531	< 0.2	< 1	< 0.5
< 0.05	< 0.05	< 0.05	0.09	14	64	< 0.01	< 0.1	533	< 0.2	< 1	< 0.5
< 0.5	< 0.5	< 0.5	< 0.5	40	180	0.1	< 1	1310	< 2	< 10	< 5
0.9	0.8	< 0.5	< 0.5	50	180	< 0.1	< 1	1330	< 2	< 10	< 5
0.5	< 0.5	< 0.5	< 0.5	60	180	< 0.1	< 1	1330	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	230	< 0.1	< 1	1680	< 2	< 10	7
< 0.5	< 0.5	0.6	0.6	60	230	< 0.1	< 1	1710	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.8	70	240	< 0.1	< 1	1720	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.7	30	130	< 0.1	< 1	970	< 2	< 10	< 5
< 0.5	< 0.5	1.1	< 0.5	20	90	< 0.1	< 1	640	< 2	< 10	< 5
< 0.5	< 0.5	0.7	< 0.5	30	130	0.1	< 1	890	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	170	0.1	< 1	1240	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	170	< 0.1	< 1	1270	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	50	180	< 0.1	< 1	1300	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	60	250	< 0.1	< 1	1810	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	60	240	< 0.1	< 1	1730	< 2	< 10	8
< 0.5	< 0.5	1.2	< 0.5	50	220	0.2	< 1	1710	< 2	< 10	7
< 0.5	< 0.5	< 0.5	< 0.5	30	80	< 0.1	< 1	620	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.5	30	80	< 0.1	< 1	640	< 2	< 10	< 5
< 0.5	1	< 0.5	< 0.5	40	80	< 0.1	< 1	620	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	30	90	< 0.1	< 1	670	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	30	80	< 0.1	< 1	720	< 2	< 10	< 5
1	< 0.5	< 0.5	0.7	40	80	0.2	< 1	860	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	30	90	< 0.1	< 1	670	< 2	< 10	< 5
< 0.5	0.8	0.7	< 0.5	20	80	0.2	< 1	660	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	0.7	20	80	0.1	< 1	660	< 2	< 10	< 5
< 0.5	1	< 0.5	< 0.5	30	90	< 0.1	< 1	710	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	30	100	< 0.1	< 1	760	< 2	< 10	< 5
< 0.5	< 0.5	1.3	0.6	30	80	< 0.1	< 1	630	< 2	< 10	< 5

S	SB	SE	SI	SN	SR	TI	V	ZN
9.22	< 0.05	< 0.05	2.26	< 0.05	0.033	< 0.002	< 0.01	0.632
11.1	< 0.05	< 0.05	2.45	< 0.05	0.049	0.006	< 0.01	0.61
31.2	< 0.5	< 0.5	2.4	< 0.5	0.26	< 0.02	< 0.1	0.2
31.8	< 0.5	0.9	2.5	< 0.5	0.27	< 0.02	< 0.1	0.21
29.5	< 0.5	< 0.5	2.4	< 0.5	0.24	< 0.02	< 0.1	0.21
44.7	< 0.5	< 0.5	1.8	< 0.5	0.4	< 0.02	< 0.1	< 0.02
45.4	< 0.5	< 0.5	1.9	< 0.5	0.41	< 0.02	< 0.1	0.03
45.8	< 0.5	< 0.5	2.1	< 0.5	0.41	< 0.02	< 0.1	0.02
111	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
114	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
117	< 5	< 5	< 5	< 5	1.1	0.3	< 1	< 0.2
151	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
154	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
156	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
96	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	0.4
64	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	0.5
88	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	0.5
114	< 5	< 5	< 5	< 5	1	< 0.2	< 1	0.2
116	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
117	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
166	6	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
158	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
142	< 5	< 5	< 5	< 5	1.4	0.5	< 1	< 0.2
54	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	< 0.2
54	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	< 0.2
51	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
59	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
63	7	< 5	< 5	< 5	0.5	< 0.2	< 1	< 0.2
53	< 5	< 5	< 5	< 5	< 0.1	0.3	< 1	0.3
65	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	0.3
63	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	0.3
59	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	0.4
62	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
65	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
56	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA	CD
BB5	a	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB5	b	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5
BB5	c	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30	< 0.5

CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB
< 0.5	0.8	< 0.5	< 0.5	40	110	< 0.1	< 1	800	< 2	< 10	< 5
< 0.5	< 0.5	< 0.5	< 0.5	40	110	< 0.1	< 1	810	< 2	< 10	< 5
< 0.5	< 0.5	0.5	< 0.5	40	110	< 0.1	< 1	790	< 2	< 10	< 5

S	SB	SE	SI	SN	SR	TI	V	ZN
70	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	< 0.2
70	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	< 0.2
69	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	< 0.2

Table 3. Analyses of interstitial water samples using ICP-AES from 1997 beach seine sites ($mg\,L^{-1}$).

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
BB1	a	19970424	< 1	< 5	< 5	1	< 0.1	< 0.1	20
BB1	b	19970424	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
BB1	c	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	20
BB2	a	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	100
BB2	b	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	100
BB2	c	19970424	< 1	< 5	< 5	3	< 0.1	< 0.1	100
BB3	a	19970424	< 1	22	< 5	2	< 0.1	< 0.1	60
BB3	b	19970424	< 1	23	< 5	3	< 0.1	< 0.1	60
BB3	c	19970424	< 1	23	< 5	< 1	< 0.1	< 0.1	60
BB4	a	19970424	< 1	< 5	< 5	3	< 0.1	< 0.1	30
BB4	b	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	30
BB4	c	19970424	< 1	< 5	< 5	16	< 0.1	< 0.1	30
BB5	a	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	140
BB5	b	19970424	< 1	< 5	< 5	2	< 0.1	< 0.1	100
BB5	c	19970424	< 1	< 5	< 5	4	0.8	< 0.1	70
DI1	a	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	130
DI1	b	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	110
DI1	c	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	120
DI2	a	19970425	< 0.3	< 1	< 1	1	< 0.03	< 0.03	120
DI2	b	19970425	< 0.3	< 1	< 1	1	< 0.03	< 0.03	130
DI2	c	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	140
DI3	a	19970425	< 0.5	< 3	< 3	3	0.08	< 0.05	120
DI3	b	19970425	< 0.5	< 3	< 3	4	0.1	< 0.05	130
DI3	c	19970425	< 0.5	< 3	< 3	3	< 0.05	< 0.05	120
DI4	a	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	160
DI4	b	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	140
DI4	c	19970425	< 0.3	< 1	< 1	2.6	0.05	< 0.03	180
DI5	a	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	120
DI5	b	19970425	< 0.3	< 1	< 1	2	0.05	< 0.03	170
DI5	c	19970425	< 0.3	< 1	< 1	2	< 0.03	< 0.03	140
WF1	a	19970430	< 1	< 5	< 5	1	< 0.1	< 0.1	< 10
WF1	b	19970430	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
WF1	c	19970430	< 1	< 5	< 5	1	< 0.1	< 0.1	< 10

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.5	< 0.5	< 0.5	< 0.5	1.4	30	80	< 0.1	< 1	660	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	1.4	20	50	< 0.1	< 1	420	< 2	< 10
< 0.5	0.6	< 0.5	< 0.5	0.5	20	50	< 0.1	< 1	430	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	110	330	< 0.1	< 1	2910	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	0.8	120	340	< 0.1	< 1	2940	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	120	340	< 0.1	< 1	3020	< 2	< 10
< 0.5	< 0.5	< 0.5	1.6	< 0.5	< 10	30	1	< 1	90	< 2	< 10
< 0.5	< 0.5	0.8	2	0.9	10	30	1.1	< 1	150	< 2	< 10
< 0.5	< 0.5	< 0.5	1.3	< 0.5	10	40	0.9	< 1	270	< 2	< 10
< 0.5	< 0.5	0.9	0.9	< 0.5	40	100	< 0.1	< 1	780	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	0.7	20	90	< 0.1	< 1	780	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	20	70	< 0.1	< 1	710	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	130	440	< 0.1	< 1	3780	< 2	< 10
< 0.5	< 0.5	2.8	< 0.5	< 0.5	90	320	0.2	< 1	2860	< 2	< 10
< 0.5	< 0.5	1.5	0.5	< 0.5	60	220	0.2	< 1	1980	< 2	< 10
< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	130	412	< 0.03	< 0.3	3600	< 0.5	< 3
< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	110	332	< 0.03	< 0.3	2900	< 0.5	< 3
< 0.1	< 0.1	< 0.1	< 0.1	0.2	120	371	< 0.03	< 0.3	3210	< 0.5	< 3
< 0.1	< 0.1	< 0.1	< 0.1	0.2	85	339	< 0.03	< 0.3	2540	< 0.5	< 3
< 0.1	< 0.1	< 0.1	0.26	< 0.1	100	380	0.06	< 0.3	2920	< 0.5	< 3
< 0.1	< 0.1	< 0.1	< 0.1	0.2	120	425	0.06	< 0.3	3380	< 0.5	< 3
< 0.3	< 0.3	< 0.3	0.4	< 0.3	140	390	< 0.05	< 0.5	3620	< 1	< 5
< 0.3	< 0.3	< 0.3	< 0.3	0.4	150	420	0.07	< 0.5	3890	< 1	< 5
< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	130	390	< 0.05	< 0.5	3640	< 1	< 5
< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	160	485	0.04	< 0.3	4110	< 0.5	< 3
< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	140	442	< 0.03	< 0.3	3800	< 0.5	< 3
< 0.1	< 0.1	< 0.1	0.36	< 0.1	180	550	0.04	< 0.3	4660	< 0.5	< 3
< 0.1	0.2	< 0.1	0.1	< 0.1	110	347	0.04	< 0.3	3020	< 0.5	< 3
< 0.1	< 0.1	0.3	0.2	< 0.1	160	479	< 0.03	< 0.3	4110	< 0.5	< 3
< 0.1	0.2	< 0.1	0.2	< 0.1	140	420	0.08	< 0.3	3620	< 0.5	< 3
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	10	< 10	0.2	< 1	120	< 2	< 10
< 0.5	< 0.5	1	< 0.5	< 0.5	< 10	< 10	< 0.1	< 1	30	< 2	< 10
< 0.5	< 0.5	1.6	< 0.5	< 0.5	< 10	< 10	0.1	< 1	30	< 2	< 10

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
< 5	50	< 5	< 5	10	< 5	0.4	< 0.2	< 1	< 0.2
< 5	36	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	0.2
< 5	34	< 5	< 5	14	< 5	0.3	< 0.2	< 1	< 0.2
< 5	217	< 5	< 5	8	< 5	1.9	< 0.2	< 1	< 0.2
< 5	218	< 5	< 5	11	< 5	1.9	< 0.2	< 1	< 0.2
< 5	223	< 5	< 5	8	< 5	1.9	< 0.2	< 1	< 0.2
< 5	116	< 5	< 5	35	< 5	0.4	< 0.2	< 1	2.2
< 5	121	< 5	< 5	47	< 5	0.4	< 0.2	< 1	2.6
< 5	127	< 5	< 5	33	< 5	0.5	< 0.2	< 1	2.1
< 5	62	< 5	< 5	19	< 5	0.6	0.4	< 1	0.3
< 5	62	< 5	< 5	15	< 5	0.5	< 0.2	< 1	0.3
< 5	58	< 5	< 5	18	< 5	0.4	< 0.2	< 1	< 0.2
< 5	280	< 5	< 5	6	< 5	2.6	< 0.2	< 1	0.3
< 5	202	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
< 5	140	< 5	8	13	< 5	1.4	< 0.2	< 1	< 0.2
< 1	318	< 1	< 1	< 1	< 1	2.53	< 0.05	< 0.3	< 0.05
< 1	257	< 1	< 1	2	< 1	2	< 0.05	< 0.3	< 0.05
< 1	292	< 1	< 1	2	< 1	2.3	< 0.05	< 0.3	< 0.05
< 1	225	< 1	< 1	3.2	< 1	2.3	< 0.05	< 0.3	< 0.05
< 1	266	< 1	< 1	2	< 1	2.53	< 0.05	< 0.3	< 0.05
< 1	305	< 1	< 1	3.1	< 1	2.75	< 0.05	0.3	< 0.05
< 3	284	< 3	3	6	< 3	2.3	0.2	< 0.5	< 0.1
< 3	311	< 3	< 3	10	< 3	2.5	0.2	< 0.5	< 0.1
< 3	290	< 3	< 3	3	< 3	2.3	< 0.1	< 0.5	< 0.1
< 1	360	< 1	< 1	1	< 1	3.03	< 0.05	< 0.3	0.2
< 1	325	< 1	< 1	< 1	< 1	2.73	< 0.05	< 0.3	< 0.05
< 1	400	< 1	< 1	2	< 1	3.48	< 0.05	< 0.3	0.1
< 1	261	< 1	< 1	3.2	< 1	2.2	< 0.05	< 0.3	0.07
< 1	352	< 1	< 1	4.4	< 1	3.05	0.07	< 0.3	< 0.05
< 1	312	< 1	< 1	2.8	< 1	2.65	< 0.05	< 0.3	< 0.05
< 5	12	< 5	< 5	10	< 5	< 0.1	< 0.2	< 1	< 0.2
< 5	< 5	< 5	< 5	< 5	< 5	< 0.1	0.3	< 1	< 0.2
< 5	< 5	< 5	< 5	5	< 5	< 0.1	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
FC1	a	19970505	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
FC1	b	19970505	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
FC1	c	19970505	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
FC2	a	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	110
FC2	b	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	100
FC2	c	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	100
FC4	a	19970505	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
FC4	b	19970505	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
FC4	c	19970505	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
FC5	a	19970505	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
FC5	b	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	100
FC5	c	19970505	< 1	< 5	< 5	1	< 0.1	< 0.1	30
FC6	a	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	170
FC6	b	19970505	< 1	< 5	< 5	3	< 0.1	< 0.1	170
FC6	c	19970505	< 1	< 5	< 5	2	< 0.1	< 0.1	170
BB1	a	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB1	b	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB1	c	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB2	a	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100
BB2	b	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90
BB2	c	19970506	< 1	< 5	< 5	1	< 0.1	< 0.1	90
BB3	a	19970506	< 1	25	< 5	< 1	< 0.1	< 0.1	50
BB3	b	19970506	< 1	28	< 5	< 1	< 0.1	< 0.1	50
BB3	c	19970506	< 1	28	< 5	< 1	< 0.1	< 0.1	50
BB4	a	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
BB4	b	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
BB4	c	19970506	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
BB5	a	19970506	< 1	< 5	< 5	1	< 0.1	< 0.1	120
BB5	b	19970506	< 1	< 5	< 5	2	< 0.1	< 0.1	130
BB5	c	19970506	< 1	< 5	< 5	1	< 0.1	< 0.1	130
DI1	a	19970507	< 1	< 5	< 5	1	< 0.1	< 0.1	140
DI1	b	19970507	< 1	< 5	< 5	2	< 0.1	< 0.1	130
DI1	c	19970507	< 1	< 5	< 5	2	< 0.1	< 0.1	140

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.5	< 0.5	1.7	< 0.5	< 0.5	< 10	20	0.1	< 1	200	2	< 10
< 0.5	< 0.5	0.9	< 0.5	< 0.5	< 10	20	< 0.1	< 1	200	< 2	< 10
< 0.5	< 0.5	0.8	< 0.5	< 0.5	20	20	< 0.1	< 1	210	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	120	340	< 0.1	< 1	3170	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	110	330	< 0.1	< 1	3080	< 2	< 10
< 0.5	< 0.5	0.5	< 0.5	< 0.5	110	300	< 0.1	< 1	2900	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	40	80	< 0.1	< 1	880	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	70	0.1	< 1	730	< 2	< 10
< 0.5	< 0.5	1.3	< 0.5	< 0.5	40	70	< 0.1	< 1	750	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	80	0.4	< 1	880	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	100	310	0.3	< 1	2790	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	40	90	0.3	< 1	1020	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	170	530	0.2	< 1	4820	< 2	< 10
< 0.5	< 0.5	0.9	< 0.5	< 0.5	180	540	0.1	< 1	4950	< 2	< 10
< 0.5	< 0.5	1.7	< 0.5	< 0.5	180	530	0.3	< 1	4830	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 10	< 0.1	< 1	140	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 10	< 0.1	< 1	140	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 10	< 0.1	< 1	140	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	60	210	< 0.1	< 1	1840	< 2	< 10
< 0.5	< 0.5	0.8	< 0.5	< 0.5	60	210	0.1	< 1	1770	< 2	< 10
< 0.5	< 0.5	2.5	< 0.5	< 0.5	60	210	< 0.1	< 1	1800	< 2	< 10
< 0.5	< 0.5	1.1	1.2	< 0.5	20	50	1.1	< 1	360	< 2	< 10
< 0.5	< 0.5	1.9	1.1	< 0.5	10	40	0.9	< 1	330	< 2	< 10
< 0.5	0.6	1.5	1.2	< 0.5	20	40	1.1	< 1	300	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	40	70	< 0.1	< 1	800	< 2	< 10
< 0.5	1.2	< 0.5	< 0.5	< 0.5	40	70	< 0.1	< 1	790	< 2	< 10
< 0.5	1	< 0.5	< 0.5	< 0.5	50	80	0.2	< 1	920	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	130	390	< 0.1	< 1	3440	< 2	< 10
< 0.5	0.7	< 0.5	< 0.5	0.6	140	420	< 0.1	< 1	3690	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	140	430	< 0.1	< 1	3790	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	150	430	< 0.1	< 1	3930	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	150	420	0.1	< 1	3850	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	150	430	< 0.1	< 1	3990	< 2	< 10

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
< 5	18	< 5	< 5	< 5	< 5	0.1	< 0.2	< 1	< 0.2
< 5	17	< 5	< 5	< 5	< 5	0.1	< 0.2	< 1	< 0.2
< 5	18	< 5	< 5	< 5	< 5	0.1	< 0.2	< 1	< 0.2
< 5	248	< 5	< 5	< 5	< 5	2.1	< 0.2	< 1	< 0.2
< 5	244	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
< 5	232	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
< 5	66	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	0.3
< 5	55	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
< 5	56	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
< 5	58	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
< 5	189	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
< 5	65	< 5	< 5	6	< 5	0.5	< 0.2	< 1	< 0.2
< 5	333	< 5	< 5	< 5	< 5	3.4	< 0.2	< 1	< 0.2
< 5	345	< 5	< 5	< 5	< 5	3.4	< 0.2	< 1	< 0.2
< 5	338	< 5	< 5	5	< 5	3.3	< 0.2	< 1	< 0.2
< 5	12	< 5	< 5	< 5	< 5	< 0.1	< 0.2	< 1	< 0.2
< 5	12	< 5	< 5	< 5	< 5	< 0.1	< 0.2	< 1	< 0.2
< 5	11	< 5	< 5	< 5	< 5	< 0.1	< 0.2	< 1	< 0.2
< 5	134	< 5	< 5	5	< 5	1.5	< 0.2	< 1	< 0.2
< 5	127	< 5	< 5	5	< 5	1.4	< 0.2	< 1	< 0.2
< 5	132	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
< 5	110	< 5	< 5	27	< 5	0.4	< 0.2	< 1	1.4
< 5	111	< 5	< 5	27	< 5	0.4	< 0.2	< 1	1.6
< 5	110	< 5	< 5	26	< 5	0.4	< 0.2	< 1	1.5
< 5	58	< 5	< 5	10	< 5	0.4	< 0.2	< 1	< 0.2
< 5	56	< 5	< 5	10	< 5	0.4	< 0.2	< 1	< 0.2
< 5	63	< 5	< 5	9	< 5	0.5	< 0.2	< 1	< 0.2
< 5	229	< 5	< 5	< 5	< 5	2.3	< 0.2	< 1	< 0.2
< 5	249	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	< 0.2
< 5	255	< 5	< 5	< 5	< 5	2.7	< 0.2	< 1	< 0.2
< 5	312	< 5	< 5	< 5	< 5	2.7	< 0.2	< 1	< 0.2
< 5	306	< 5	< 5	< 5	< 5	2.6	< 0.2	< 1	< 0.2
< 5	317	< 5	< 5	< 5	< 5	2.7	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
DI2	a	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	10
DI2	b	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	10
DI2	c	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	10
DI3	a	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI3	b	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI3	c	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI4	a	19970507	< 1	< 5	< 5	1	< 0.1	< 0.1	50
DI4	b	19970507	< 1	< 5	< 5	1	< 0.1	< 0.1	50
DI4	c	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI5	a	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70
DI5	b	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	80
DI5	c	19970507	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70
SC1	a	19970508	< 1	< 5	< 5	1	< 0.1	< 0.1	60
SC1	b	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
SC1	c	19970508	< 1	< 5	< 5	1	< 0.1	< 0.1	50
SC2	a	19970508	< 1	< 5	< 5	2	< 0.1	< 0.1	100
SC2	b	19970508	< 1	< 5	< 5	2	< 0.1	< 0.1	100
SC2	c	19970508	< 1	< 5	< 5	2	< 0.1	< 0.1	90
SC3	a	19970508	< 1	< 5	< 5	2	< 0.1	< 0.1	190
SC3	b	19970508	< 1	< 5	< 5	2	0.2	< 0.1	170
SC3	c	19970508	< 1	< 5	< 5	2	< 0.1	< 0.1	180
SC4	a	19970508	< 1	< 5	< 5	2	< 0.1	< 0.1	70
SC4	b	19970508	< 1	< 5	< 5	2	< 0.1	< 0.1	70
SC4	c	19970508	< 1	< 5	< 5	1	< 0.1	< 0.1	70
SC5	a	19970508	< 1	< 5	< 5	1	< 0.1	< 0.1	130
SC5	b	19970508	< 1	< 5	< 5	2	< 0.1	< 0.1	130
SC5	c	19970508	< 1	< 5	< 5	1	< 0.1	< 0.1	130
SC6	a	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	120
SC6	b	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	110
SC6	c	19970508	< 1	< 5	< 5	< 1	< 0.1	< 0.1	110
WF1	a	19970509	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
WF1	b	19970509	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
WF1	c	19970509	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.5	< 0.5	0.6	< 0.5	< 0.5	30	30	< 0.1	< 1	550	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	20	30	0.1	< 1	530	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	0.9	20	30	< 0.1	< 1	550	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	60	190	0.2	< 1	1840	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	60	190	0.2	< 1	1800	< 2	< 10
< 0.5	0.9	< 0.5	< 0.5	0.7	60	200	0.1	< 1	1790	< 2	< 10
< 0.5	0.5	< 0.5	< 0.5	< 0.5	80	200	0.2	< 1	1960	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	200	0.2	< 1	2000	< 2	< 10
< 0.5	0.5	< 0.5	< 0.5	< 0.5	80	200	0.1	< 1	1980	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	70	220	< 0.1	< 1	1930	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	230	< 0.1	< 1	1990	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	70	200	< 0.1	< 1	1750	< 2	< 10
< 0.5	< 0.5	0.7	< 0.5	< 0.5	80	180	< 0.1	< 1	1810	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	200	0.2	< 1	1950	< 2	< 10
< 0.5	0.7	< 0.5	< 0.5	1.6	60	150	0.2	< 1	1460	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	130	320	0.2	< 1	3160	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	130	320	< 0.1	< 1	3170	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	120	320	< 0.1	< 1	3100	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	190	610	< 0.1	< 1	5310	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	0.7	180	560	< 0.1	< 1	4900	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	190	590	< 0.1	< 1	5200	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	100	240	< 0.1	< 1	2560	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	100	230	< 0.1	< 1	2350	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	220	< 0.1	< 1	2150	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	120	380	< 0.1	< 1	3530	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	130	380	< 0.1	< 1	3490	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	140	400	0.2	< 1	3660	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	70	250	< 0.1	< 1	1990	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	0.8	70	250	0.2	< 1	2020	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	70	260	< 0.1	< 1	2110	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	40	140	< 0.1	< 1	1400	< 2	< 10
< 0.5	< 0.5	0.6	< 0.5	< 0.5	40	120	< 0.1	< 1	1120	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	90	< 0.1	< 1	910	< 2	< 10

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
< 5	50	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
< 5	47	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
< 5	46	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
< 5	127	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
< 5	123	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
< 5	122	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	0.3
< 5	151	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	154	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	153	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	151	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
< 5	155	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	0.2
< 5	136	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	< 0.2
< 5	129	< 5	< 5	6	< 5	1.1	< 0.2	< 1	< 0.2
< 5	140	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
< 5	105	< 5	< 5	5	< 5	0.9	< 0.2	< 1	< 0.2
< 5	241	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
< 5	241	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
< 5	237	< 5	< 5	< 5	< 5	1.8	< 0.2	< 1	< 0.2
< 5	455	< 5	< 5	< 5	< 5	3.8	< 0.2	< 1	0.8
< 5	384	< 5	< 5	< 5	< 5	3.5	0.4	< 1	< 0.2
< 5	402	< 5	< 5	< 5	< 5	3.6	< 0.2	< 1	< 0.2
< 5	187	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
< 5	182	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	6.2
< 5	159	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	0.2
< 5	272	< 5	< 5	< 5	< 5	2.4	< 0.2	< 1	0.7
< 5	272	< 5	< 5	< 5	< 5	2.4	< 0.2	< 1	< 0.2
< 5	286	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	2.5
< 5	154	< 5	< 5	13	< 5	1.8	< 0.2	< 1	< 0.2
< 5	158	< 5	6	12	< 5	1.7	< 0.2	< 1	< 0.2
< 5	162	< 5	8	11	< 5	1.7	< 0.2	< 1	< 0.2
< 5	104	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
< 5	84	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	< 0.2
< 5	70	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	0.4

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
FC1	a	19970520	< 1	< 5	< 5	2	< 0.1	< 0.1	70
FC1	b	19970520	< 1	< 5	< 5	1	< 0.1	< 0.1	70
FC4	a	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
FC4	b	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
FC4	c	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
FC5	a	19970520	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90
FC5	b	19970520	< 1	< 5	< 5	1	< 0.1	< 0.1	100
FC5	c	19970520	< 1	< 5	< 5	2	< 0.1	< 0.1	120
FC6	a	19970520	< 1	< 5	< 5	2	0.1	< 0.1	150
FC6	b	19970520	< 1	< 5	< 5	2	0.1	< 0.1	160
FC6	c	19970520	< 1	< 5	< 5	2	< 0.1	< 0.1	160
BB1	a	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
BB1	b	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
BB1	c	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB2	a	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
BB2	b	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
BB2	c	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
BB3	a	19970521	< 1	26	< 5	< 1	< 0.1	< 0.1	50
BB3	b	19970521	< 1	23	< 5	< 1	< 0.1	< 0.1	50
BB3	c	19970521	< 1	26	< 5	< 1	< 0.1	< 0.1	50
BB4	a	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
BB4	b	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB4	c	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB5	a	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB5	b	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
BB5	c	19970521	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
SC1	a	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
SC1	b	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
SC1	c	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
SC2	a	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70
SC2	b	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	70
SC2	c	19970523	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.5	0.5	< 0.5	< 0.5	< 0.5	90	230	< 0.1	< 1	2180	< 2	< 10
< 0.5	0.7	< 0.5	< 0.5	< 0.5	90	230	< 0.1	< 1	2220	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	60	< 0.1	< 1	650	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	20	60	< 0.1	< 1	630	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	100	0.2	< 1	1110	< 2	< 10
< 0.5	< 0.5	< 0.5	1.7	< 0.5	90	240	< 0.1	< 1	2370	< 2	< 10
< 0.5	< 0.5	< 0.5	1.4	< 0.5	100	270	< 0.1	< 1	2670	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	110	290	< 0.1	< 1	2860	< 2	< 10
< 0.5	0.5	< 0.5	< 0.5	< 0.5	140	420	0.3	< 1	3710	< 2	< 10
< 0.5	< 0.5	2.3	< 0.5	< 0.5	150	460	0.5	< 1	4030	< 2	< 10
< 0.5	< 0.5	1.4	0.8	< 0.5	160	470	0.5	< 1	4060	< 2	< 10
< 0.5	< 0.5	< 0.5	0.6	< 0.5	30	70	< 0.1	< 1	710	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	70	< 0.1	< 1	840	< 2	< 10
< 0.5	< 0.5	< 0.5	0.8	< 0.5	20	30	< 0.1	< 1	430	< 2	< 10
< 0.5	< 0.5	< 0.5	0.8	< 0.5	40	110	< 0.1	< 1	1120	< 2	< 10
< 0.5	< 0.5	0.6	1	< 0.5	50	110	< 0.1	< 1	1090	< 2	< 10
< 0.5	< 0.5	< 0.5	1.2	< 0.5	50	110	< 0.1	< 1	1090	< 2	< 10
< 0.5	< 0.5	0.6	1.6	< 0.5	< 10	40	0.7	< 1	250	< 2	< 10
< 0.5	1.7	< 0.5	1.4	< 0.5	10	60	0.7	< 1	450	< 2	< 10
< 0.5	0.8	0.9	1.3	< 0.5	< 10	40	0.6	< 1	260	< 2	< 10
< 0.5	< 0.5	2.1	< 0.5	< 0.5	30	120	< 0.1	< 1	1170	< 2	< 10
< 0.5	< 0.5	2.2	0.5	< 0.5	60	150	< 0.1	< 1	1400	< 2	< 10
< 0.5	< 0.5	2.7	< 0.5	< 0.5	60	150	< 0.1	< 1	1430	< 2	< 10
< 0.5	< 0.5	1.9	< 0.5	< 0.5	20	20	< 0.1	< 1	280	< 2	< 10
< 0.5	0.5	1.4	< 0.5	< 0.5	20	50	< 0.1	< 1	570	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	100	< 0.1	< 1	890	< 2	< 10
< 0.5	< 0.5	< 0.5	0.9	5.7	40	110	0.1	< 1	1200	< 2	< 10
< 0.5	< 0.5	< 0.5	0.7	1.8	60	160	0.2	< 1	1500	< 2	< 10
< 0.5	< 0.5	< 0.5	0.5	4	40	110	< 0.1	< 1	1170	< 2	< 10
< 0.5	< 0.5	< 0.5	0.6	< 0.5	90	230	< 0.1	< 1	2220	< 2	< 10
< 0.5	< 0.5	< 0.5	0.5	< 0.5	90	240	< 0.1	< 1	2230	< 2	< 10
< 0.5	< 0.5	< 0.5	0.5	< 0.5	90	230	< 0.1	< 1	2230	< 2	< 10

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
< 5	169	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	0.3
< 5	171	< 5	< 5	< 5	< 5	1.4	< 0.2	< 1	< 0.2
< 5	50	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
< 5	49	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
5	84	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	0.4
< 5	180	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
< 5	200	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	< 0.2
< 5	217	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	0.2
< 5	292	< 5	< 5	13	< 5	2.7	< 0.2	< 1	0.3
< 5	296	< 5	< 5	12	< 5	2.9	< 0.2	< 1	< 0.2
< 5	299	< 5	< 5	11	< 5	3	< 0.2	< 1	< 0.2
< 5	57	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
< 5	68	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
< 5	35	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
< 5	98	< 5	< 5	5	< 5	0.6	< 0.2	< 1	< 0.2
< 5	95	< 5	< 5	6	< 5	0.6	< 0.2	< 1	< 0.2
< 5	96	< 5	< 5	5	< 5	0.6	< 0.2	< 1	2.3
< 5	130	< 5	< 5	28	< 5	0.4	< 0.2	< 1	1.8
< 5	124	< 5	< 5	26	< 5	0.5	< 0.2	< 1	1.6
< 5	134	< 5	< 5	27	< 5	0.4	< 0.2	< 1	1.7
< 5	95	< 5	< 5	9	< 5	0.7	< 0.2	< 1	< 0.2
< 5	108	< 5	< 5	10	< 5	0.9	< 0.2	< 1	< 0.2
< 5	110	< 5	< 5	9	< 5	0.9	< 0.2	< 1	< 0.2
< 5	26	< 5	5	< 5	< 5	0.1	0.5	< 1	0.5
< 5	55	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
< 5	75	< 5	< 5	< 5	< 5	0.5	< 0.2	< 1	< 0.2
< 5	81	< 5	< 5	7	< 5	0.7	< 0.2	< 1	< 0.2
< 5	110	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
< 5	77	< 5	< 5	6	< 5	0.7	< 0.2	< 1	< 0.2
< 5	164	< 5	< 5	< 5	< 5	1.3	< 0.2	< 1	< 0.2
< 5	165	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
< 5	161	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
SC3	a	19970523	< 1	< 5	< 5	2	< 0.1	< 0.1	150
SC3	b	19970523	< 1	< 5	< 5	2	< 0.1	< 0.1	160
SC3	c	19970523	< 1	< 5	< 5	2	< 0.1	< 0.1	140
WF1	a	19970526	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
WF1	b	19970526	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
WF1	c	19970526	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
DI1	a	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	110
DI1	b	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100
DI1	c	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	100
DI2	a	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI2	b	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI2	c	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI3	a	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
DI3	b	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
DI3	c	19970527	< 1	< 5	< 5	< 1	0.1	< 0.1	10
DI4	a	19970527	< 1	< 5	< 5	< 1	0.1	< 0.1	10
DI4	b	19970527	< 1	< 5	< 5	< 1	0.1	< 0.1	20
DI4	c	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
DI5	a	19970527	< 1	< 5	< 5	< 1	0.1	< 0.1	60
DI5	b	19970527	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI5	c	19970527	< 1	< 5	< 5	< 1	0.1	< 0.1	80
FC1	a	19970604	< 0.1	< 0.5	< 0.5	1.4	< 0.01	< 0.01	80
FC1	b	19970604	< 0.1	< 0.5	< 0.5	1.8	< 0.01	< 0.01	116
FC1	c	19970604	< 0.1	< 0.5	< 0.5	1.9	< 0.01	< 0.01	124
FC2	a	19970604	< 0.1	0.5	< 0.5	1.6	< 0.01	< 0.01	70
FC2	b	19970604	< 0.1	< 0.5	< 0.5	1.5	0.01	< 0.01	71
FC2	c	19970604	< 0.1	< 0.5	< 0.5	1.5	< 0.01	< 0.01	78
FC3	a	19970604	< 0.1	< 0.5	< 0.5	1.3	0.02	< 0.01	51
FC3	b	19970604	< 0.1	< 0.5	< 0.5	1.2	< 0.01	< 0.01	51
FC3	c	19970604	< 0.1	< 0.5	< 0.5	1.3	< 0.01	< 0.01	52
FC4	a	19970604	< 0.1	< 0.5	< 0.5	0.9	< 0.01	< 0.01	23
FC4	b	19970604	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	21
FC4	c	19970604	< 0.1	< 0.5	< 0.5	0.8	< 0.01	< 0.01	22

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.5	< 0.5	< 0.5	1	< 0.5	170	510	< 0.1	< 1	4620	< 2	< 10
< 0.5	< 0.5	< 0.5	1	< 0.5	180	520	< 0.1	< 1	4700	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	150	440	< 0.1	< 1	4150	< 2	< 10
< 0.5	0.5	< 0.5	0.7	< 0.5	20	50	< 0.1	< 1	490	< 2	< 10
< 0.5	0.6	< 0.5	0.9	< 0.5	20	50	< 0.1	< 1	480	< 2	< 10
< 0.5	< 0.5	0.8	< 0.5	< 0.5	20	50	0.1	< 1	490	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	90	330	0.4	< 1	2760	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	320	< 0.1	< 1	2670	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	320	< 0.1	< 1	2650	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	40	170	< 0.1	< 1	1620	< 2	< 10
< 0.5	0.5	1.1	< 0.5	< 0.5	60	180	0.1	< 1	1610	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	60	180	< 0.1	< 1	1630	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	20	70	< 0.1	< 1	700	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	20	50	< 0.1	< 1	580	< 2	< 10
< 0.5	< 0.5	0.6	0.9	< 0.5	20	50	0.2	< 1	490	< 2	< 10
< 0.5	< 0.5	0.8	2.6	< 0.5	40	50	0.2	< 1	760	< 2	< 10
< 0.5	< 0.5	1.1	0.6	< 0.5	40	50	0.3	< 1	680	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	50	0.2	< 1	720	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	0.7	60	160	0.2	< 1	1300	< 2	< 10
< 0.5	< 0.5	0.7	< 0.5	< 0.5	50	150	< 0.1	< 1	1270	< 2	< 10
< 0.5	< 0.5	1.7	< 0.5	< 0.5	80	230	0.2	< 1	1880	< 2	< 10
< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	82	236	0.01	< 0.1	2070	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.2	< 0.05	114	335	< 0.01	< 0.1	2800	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.17	< 0.05	123	355	< 0.01	< 0.1	2950	< 0.2	< 1
< 0.05	< 0.05	0.2	0.1	0.13	76	181	0.01	< 0.1	1680	< 0.2	< 1
< 0.05	0.08	0.13	0.14	0.08	74	180	< 0.01	< 0.1	1640	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.1	< 0.05	82	204	< 0.01	< 0.1	1860	< 0.2	< 1
< 0.05	0.08	0.13	0.16	0.11	68	157	0.01	< 0.1	1480	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.1	< 0.05	64	154	< 0.01	< 0.1	1470	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	66	158	< 0.01	< 0.1	1530	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.12	< 0.05	32	70	< 0.01	< 0.1	748	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.1	0.18	29	64	< 0.01	< 0.1	687	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.12	0.13	31	70	0.01	< 0.1	750	< 0.2	< 1

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
< 5	358	< 5	< 5	< 5	< 5	2.9	< 0.2	< 1	< 0.2
< 5	364	< 5	< 5	< 5	< 5	3	< 0.2	< 1	< 0.2
< 5	323	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	< 0.2
< 5	37	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
< 5	38	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
< 5	38	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	4.6
< 5	225	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
< 5	218	< 5	< 5	< 5	< 5	2	< 0.2	< 1	< 0.2
< 5	215	< 5	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
< 5	129	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	131	< 5	< 5	< 5	< 5	1.2	< 0.2	< 1	< 0.2
< 5	133	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	60	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	0.5
< 5	50	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	1
< 5	49	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
< 5	65	< 5	< 5	< 5	< 5	0.3	0.3	< 1	< 0.2
< 5	56	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
< 5	58	< 5	< 5	< 5	< 5	0.2	< 0.2	< 1	< 0.2
< 5	116	< 5	< 5	6	< 5	1.1	0.4	< 1	< 0.2
< 5	115	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	161	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
< 0.5	174	< 0.5	< 0.5	2.2	< 0.5	1.53	< 0.02	< 0.1	0.07
< 0.5	241	< 0.5	< 0.5	3	< 0.5	2.16	< 0.02	< 0.1	0.04
< 0.5	255	< 0.5	< 0.5	3	< 0.5	2.31	< 0.02	< 0.1	< 0.02
< 0.5	146	< 0.5	< 0.5	3.5	< 0.5	1.2	< 0.02	< 0.1	0.06
< 0.5	145	< 0.5	0.7	3.6	< 0.5	1.2	0.07	< 0.1	0.03
< 0.5	164	< 0.5	< 0.5	3.7	< 0.5	1.32	< 0.02	< 0.1	< 0.02
< 0.5	129	< 0.5	< 0.5	10.1	< 0.5	0.93	0.08	< 0.1	0.03
< 0.5	128	< 0.5	< 0.5	9.5	< 0.5	0.91	< 0.02	< 0.1	< 0.02
< 0.5	135	< 0.5	< 0.5	10.4	< 0.5	0.93	< 0.02	< 0.1	< 0.02
< 0.5	63.6	< 0.5	< 0.5	5.1	< 0.5	0.4	< 0.02	< 0.1	0.03
< 0.5	57.2	< 0.5	< 0.5	4.6	< 0.5	0.37	< 0.02	< 0.1	0.03
< 0.5	61.4	< 0.5	< 0.5	5.4	< 0.5	0.4	< 0.02	< 0.1	0.04

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
FC5	a	19970604	< 0.1	< 0.5	< 0.5	0.8	< 0.01	< 0.01	31
FC5	b	19970604	< 0.1	< 0.5	< 0.5	1.1	< 0.01	< 0.01	46
FC5	c	19970604	< 0.1	< 0.5	< 0.5	1.2	0.03	< 0.01	37
FC6	a	19970604	< 0.1	< 0.5	< 0.5	1.6	< 0.01	< 0.01	105
FC6	b	19970604	< 0.1	< 0.5	< 0.5	1.6	< 0.01	< 0.01	107
FC6	c	19970604	< 0.1	< 0.5	< 0.5	1.8	< 0.01	< 0.01	118
BB1	a	19970605	< 0.1	< 0.5	< 0.5	0.6	0.05	< 0.01	23
BB1	b	19970605	< 0.1	< 0.5	< 0.5	0.6	0.01	< 0.01	3
BB1	c	19970605	< 0.1	< 0.5	< 0.5	0.4	< 0.01	< 0.01	2
BB2	a	19970605	< 0.1	< 0.5	< 0.5	1	0.01	< 0.01	53
BB2	b	19970605	< 0.1	< 0.5	< 0.5	1.3	0.03	< 0.01	75
BB2	c	19970605	< 0.1	< 0.5	< 0.5	1.6	0.03	< 0.01	82
BB3	a	19970605	< 0.1	< 0.5	< 0.5	1.2	0.02	< 0.01	54
BB3	b	19970605	< 0.1	0.7	< 0.5	0.9	0.01	< 0.01	48
BB3	c	19970605	< 0.1	< 0.5	< 0.5	0.8	0.01	< 0.01	46
BB4	a	19970605	< 0.1	< 0.5	< 0.5	1.2	0.01	< 0.01	77
BB4	b	19970605	< 0.1	< 0.5	< 0.5	1	< 0.01	< 0.01	54
BB4	c	19970605	< 0.1	< 0.5	< 0.5	1	< 0.01	< 0.01	63
BB5	a	19970605	< 0.1	< 0.5	< 0.5	1.4	< 0.01	< 0.01	78
BB5	b	19970605	< 0.1	< 0.5	< 0.5	1.3	< 0.01	< 0.01	54
BB5	c	19970605	< 0.1	< 0.5	< 0.5	1.3	0.02	< 0.01	92
D1	a	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI1	b	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI1	c	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	60
DI2	a	19970606	< 1	< 5	< 5	1	< 0.1	< 0.1	80
DI2	b	19970606	< 1	< 5	< 5	1	< 0.1	< 0.1	80
DI2	c	19970606	< 1	< 5	< 5	1	< 0.1	< 0.1	80
DI3	a	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
DI3	b	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
DI3	c	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
DI4	a	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
DI4	b	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
DI4	c	19970606	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.05	< 0.05	< 0.05	0.1	0.1	42	103	< 0.01	< 0.1	1040	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.11	0.05	60	149	< 0.01	< 0.1	1450	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.21	0.07	49	118	< 0.01	< 0.1	1170	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.11	0.09	112	315	0.02	< 0.1	2730	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.09	0.06	119	325	0.03	< 0.1	2800	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	0.06	128	352	0.03	< 0.1	3030	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.27	< 0.05	11	13	< 0.01	< 0.1	239	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.2	0.05	6	5	< 0.01	< 0.1	150	< 0.2	< 1
< 0.05	< 0.05	0.07	0.09	< 0.05	8	7	< 0.01	< 0.1	171	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.12	0.35	46	132	0.07	< 0.1	1100	< 0.2	< 1
< 0.05	0.08	0.13	0.22	0.24	62	180	0.09	< 0.1	1420	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.23	0.49	65	204	0.08	< 0.1	1570	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.26	0.15	51	123	0.14	< 0.1	1130	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.61	0.06	35	84	0.03	< 0.1	730	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.12	< 0.05	43	96	0.05	< 0.1	913	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.12	0.38	81	221	0.03	< 0.1	1920	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.17	0.08	58	153	0.01	< 0.1	1390	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.15	0.12	69	185	0.02	< 0.1	1650	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.11	< 0.05	87	242	< 0.01	< 0.1	2090	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.13	< 0.05	64	162	< 0.01	< 0.1	1480	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.17	< 0.05	89	275	< 0.01	< 0.1	2120	< 0.2	< 1
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	60	180	< 0.1	< 1	1620	< 2	< 10
< 0.5	< 0.5	< 0.5	1	< 0.5	60	180	< 0.1	< 1	1610	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	60	180	< 0.1	< 1	1630	< 2	< 10
< 0.5	< 0.5	< 0.5	1	< 0.5	80	230	< 0.1	< 1	2060	< 2	< 10
< 0.5	< 0.5	0.8	< 0.5	< 0.5	80	230	< 0.1	< 1	2040	< 2	< 10
< 0.5	< 0.5	< 0.5	0.9	< 0.5	80	230	< 0.1	< 1	2100	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	20	60	< 0.1	< 1	600	< 2	< 10
< 0.5	0.7	< 0.5	< 0.5	< 0.5	30	60	0.2	< 1	610	< 2	< 10
< 0.5	< 0.5	0.5	0.7	< 0.5	30	60	< 0.1	< 1	600	< 2	< 10
< 0.5	< 0.5	< 0.5	1.3	< 0.5	60	130	< 0.1	< 1	1310	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	60	130	< 0.1	< 1	1350	< 2	< 10
< 0.5	< 0.5	< 0.5	0.8	0.7	50	130	< 0.1	< 1	1370	< 2	< 10

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
< 0.5	83.1	< 0.5	< 0.5	5.5	< 0.5	0.57	< 0.02	< 0.1	< 0.02
< 0.5	118	< 0.5	< 0.5	5.4	< 0.5	0.84	< 0.02	< 0.1	0.02
< 0.5	96.4	< 0.5	< 0.5	5.5	< 0.5	0.67	< 0.02	< 0.1	0.03
< 0.5	245	< 0.5	< 0.5	4.3	< 0.5	1.96	< 0.02	< 0.1	0.03
< 0.5	249	< 0.5	< 0.5	4.5	< 0.5	2.01	< 0.02	< 0.1	< 0.02
< 0.5	276	< 0.5	< 0.5	4.9	< 0.5	2.19	< 0.02	< 0.1	0.03
< 0.5	21.9	< 0.5	< 0.5	2.1	< 0.5	0.08	< 0.02	< 0.1	0.93
< 0.5	13.6	< 0.5	< 0.5	2.1	< 0.5	0.03	< 0.02	< 0.1	0.07
< 0.5	16.1	< 0.5	< 0.5	1.5	< 0.5	0.04	< 0.02	< 0.1	0.05
< 0.5	106	< 0.5	< 0.5	2.6	< 0.5	0.85	< 0.02	< 0.1	0.02
< 0.5	139	< 0.5	< 0.5	4	< 0.5	1.19	0.06	< 0.1	0.03
< 0.5	146	< 0.5	< 0.5	4.3	< 0.5	1.33	< 0.02	< 0.1	0.03
< 0.5	124	< 0.5	< 0.5	13.1	< 0.5	0.85	< 0.02	< 0.1	0.25
< 0.5	96.1	< 0.5	< 0.5	14.4	< 0.5	0.64	< 0.02	< 0.1	0.76
< 0.5	104	< 0.5	< 0.5	14.5	< 0.5	0.67	< 0.02	< 0.1	0.19
< 0.5	171	< 0.5	< 0.5	5.1	< 0.5	1.36	< 0.02	< 0.1	0.1
< 0.5	125	< 0.5	< 0.5	4.4	< 0.5	0.94	< 0.02	< 0.1	0.1
< 0.5	143	< 0.5	< 0.5	4.8	< 0.5	1.12	< 0.02	< 0.1	0.08
< 0.5	192	< 0.5	< 0.5	2.4	< 0.5	1.44	< 0.02	< 0.1	0.05
< 0.5	139	< 0.5	< 0.5	2.4	< 0.5	0.96	< 0.02	< 0.1	0.06
< 0.5	185	< 0.5	< 0.5	2.7	< 0.5	1.69	< 0.02	< 0.1	0.06
< 5	130	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	131	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	131	< 5	< 5	< 5	< 5	1.1	< 0.2	< 1	< 0.2
< 5	165	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
< 5	163	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
< 5	166	< 5	< 5	< 5	< 5	1.5	< 0.2	< 1	< 0.2
< 5	45	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
< 5	44	< 5	< 5	< 5	< 5	0.3	< 0.2	< 1	< 0.2
< 5	47	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
< 5	103	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
< 5	107	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	< 0.2
< 5	110	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	2.6

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
DI5	a	19970606	< 1	< 5	< 5	1	< 0.1	< 0.1	90
DI5	b	19970606	< 1	< 5	< 5	2	< 0.1	< 0.1	90
DI5	c	19970606	< 1	< 5	< 5	2	< 0.1	< 0.1	90
BB1	a	19970620	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	5
BB1	b	19970620	< 0.1	< 0.5	< 0.5	0.5	< 0.01	< 0.01	4
BB1	c	19970620	< 0.1	< 0.5	< 0.5	0.5	< 0.01	< 0.01	4
BB2	a	19970620	< 0.1	< 0.5	< 0.5	1.1	< 0.01	< 0.01	61
BB2	b	19970620	< 0.1	< 0.5	< 0.5	1.1	0.04	< 0.01	59
BB2	c	19970620	< 0.1	< 0.5	< 0.5	1.2	< 0.01	< 0.01	58
BB3	a	19970620	< 0.1	28.1	< 0.5	0.5	0.01	< 0.01	51
BB3	b	19970620	< 0.1	26.3	< 0.5	0.6	0.01	< 0.01	47
BB3	c	19970620	< 0.1	26.6	< 0.5	0.5	0.04	< 0.01	49
BB4	a	19970620	< 0.1	1.1	< 0.5	0.8	0.02	< 0.01	23
BB4	b	19970620	< 0.1	< 0.5	< 0.5	0.8	< 0.01	< 0.01	22
BB4	c	19970620	< 0.1	< 0.5	< 0.5	0.8	0.01	< 0.01	22
BB5	a	19970620	< 0.1	< 0.5	< 0.5	0.9	< 0.01	< 0.01	18
BB5	b	19970620	< 0.1	< 0.5	< 0.5	1.2	0.04	< 0.01	11
BB5	c	19970620	< 0.1	< 0.5	< 0.5	1	0.02	< 0.01	19
BB1	a	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB1	b	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB1	c	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB2	a	19970704	< 1	< 5	< 5	1	< 0.1	< 0.1	50
BB2	b	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
BB2	c	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
BB3	a	19970704	< 1	21	< 5	< 1	< 0.1	< 0.1	40
BB3	b	19970704	< 1	23	< 5	< 1	< 0.1	< 0.1	50
BB3	c	19970704	< 1	21	< 5	< 1	< 0.1	< 0.1	50
BB4	a	19970704	< 1	< 5	< 5	1	< 0.1	< 0.1	40
BB4	b	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB4	c	19970704	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB5	a	19970704	< 1	< 5	< 5	1	< 0.1	< 0.1	110
BB5	b	19970704	< 1	< 5	< 5	< 1	0.1	< 0.1	50
BB5	c	19970704	< 1	< 5	< 5	2	0.1	< 0.1	90

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.5	< 0.5	0.7	0.7	< 0.5	100	290	< 0.1	< 1	2520	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	260	< 0.1	< 1	2400	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	270	< 0.1	< 1	2390	< 2	< 10
< 0.05	< 0.05	< 0.05	0.09	0.06	11	14	0.01	< 0.1	272	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.09	< 0.05	10	13	< 0.01	< 0.1	232	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.07	< 0.05	10	13	0.02	< 0.1	228	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	0.53	46	141	1.07	< 0.1	1240	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.12	0.25	44	133	0.99	< 0.1	1180	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	0.16	44	132	1.1	< 0.1	1190	< 0.2	< 1
< 0.05	< 0.05	< 0.05	1.69	0.13	13	51	0.76	< 0.1	400	< 0.2	< 1
< 0.05	< 0.05	< 0.05	1.64	0.16	12	47	0.7	< 0.1	367	< 0.2	< 1
< 0.05	0.05	< 0.05	1.63	0.17	12	48	0.72	< 0.1	366	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.21	1.13	23	54	0.02	< 0.1	548	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.12	< 0.05	23	51	0.01	< 0.1	517	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.12	0.08	22	52	< 0.01	< 0.1	524	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	24	53	0.03	< 0.1	609	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	0.09	18	35	< 0.01	< 0.1	431	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.06	0.06	25	55	< 0.01	< 0.1	624	< 0.2	< 1
< 0.5	< 0.5	0.7	< 0.5	< 0.5	10	30	< 0.1	< 1	230	< 2	< 10
< 0.5	< 0.5	1	0.8	< 0.5	10	10	0.2	< 1	140	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 10	< 0.1	< 1	120	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	50	140	0.2	< 1	1210	< 2	< 10
< 0.5	0.6	< 0.5	0.7	< 0.5	50	130	< 0.1	< 1	1120	< 2	< 10
< 0.5	< 0.5	< 0.5	0.8	< 0.5	50	130	0.2	< 1	1130	< 2	< 10
< 0.5	< 0.5	< 0.5	1.3	< 0.5	< 10	30	0.7	< 1	210	< 2	< 10
< 0.5	< 0.5	0.6	1.6	< 0.5	20	40	0.8	< 1	210	< 2	< 10
< 0.5	< 0.5	0.6	1.5	0.5	< 10	30	0.8	< 1	200	< 2	< 10
< 0.5	< 0.5	< 0.5	0.5	< 0.5	50	110	0.1	< 1	1090	< 2	< 10
< 0.5	< 0.5	< 0.5	0.9	1.6	110	140	< 0.1	< 1	1200	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	80	150	0.2	< 1	1240	< 2	< 10
< 0.5	< 0.5	< 0.5	0.7	< 0.5	150	310	0.2	< 1	2630	< 2	< 10
< 0.5	< 0.5	< 0.5	0.5	0.7	20	150	< 0.1	< 1	1290	< 2	< 10
< 0.5	0.8	< 0.5	0.9	< 0.5	90	260	0.2	< 1	2220	< 2	< 10

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
< 5	202	< 5	< 5	< 5	< 5	1.8	< 0.2	< 1	0.3
< 5	204	< 5	6	< 5	< 5	1.6	< 0.2	< 1	< 0.2
< 5	199	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	< 0.2
0.7	20.5	< 0.5	< 0.5	3.1	< 0.5	0.09	< 0.02	0.1	0.04
< 0.5	17.7	< 0.5	< 0.5	2.4	< 0.5	0.08	< 0.02	< 0.1	0.11
< 0.5	17.3	< 0.5	< 0.5	2.5	< 0.5	0.08	< 0.02	< 0.1	0.05
< 0.5	103	< 0.5	< 0.5	3.8	< 0.5	0.94	< 0.02	< 0.1	0.04
< 0.5	97.1	< 0.5	< 0.5	4	< 0.5	0.89	< 0.02	< 0.1	0.08
< 0.5	98.5	< 0.5	< 0.5	4.2	< 0.5	0.87	0.02	< 0.1	0.11
< 0.5	151	< 0.5	< 0.5	31.3	< 0.5	0.47	< 0.02	< 0.1	1.77
< 0.5	141	< 0.5	< 0.5	29.3	< 0.5	0.44	< 0.02	< 0.1	1.69
< 0.5	144	< 0.5	< 0.5	29.7	< 0.5	0.45	< 0.02	< 0.1	1.68
< 0.5	56.2	< 0.5	< 0.5	13.1	< 0.5	0.36	0.04	< 0.1	0.13
< 0.5	53.1	< 0.5	< 0.5	10.4	< 0.5	0.34	< 0.02	< 0.1	0.15
< 0.5	53.9	< 0.5	< 0.5	10.5	< 0.5	0.35	< 0.02	< 0.1	0.13
< 0.5	62.8	< 0.5	< 0.5	2.5	< 0.5	0.32	< 0.02	< 0.1	0.04
< 0.5	49.7	< 0.5	< 0.5	3.4	< 0.5	0.22	0.02	< 0.1	0.02
< 0.5	58.3	< 0.5	< 0.5	2.7	< 0.5	0.34	0.03	< 0.1	0.14
< 5	18	< 5	< 5	5	< 5	0.1	0.4	< 1	0.6
< 5	9	< 5	< 5	< 5	< 5	0.1	0.3	< 1	0.3
< 5	7	< 5	< 5	< 5	< 5	< 0.1	< 0.2	< 1	0.3
< 5	104	< 5	< 5	6	< 5	0.9	0.2	< 1	< 0.2
< 5	96	< 5	< 5	6	< 5	0.8	< 0.2	< 1	0.6
< 5	97	< 5	< 5	< 5	< 5	0.8	< 0.2	< 1	0.3
< 5	103	< 5	< 5	26	< 5	0.3	< 0.2	< 1	1.6
< 5	107	< 5	< 5	28	< 5	0.4	< 0.2	< 1	1.8
< 5	105	< 5	< 5	27	< 5	0.4	< 0.2	< 1	2
< 5	81	< 5	< 5	7	< 5	0.7	< 0.2	< 1	< 0.2
< 5	79	< 5	< 5	8	< 5	0.9	0.2	< 1	0.2
< 5	82	< 5	< 5	8	< 5	0.9	< 0.2	< 1	< 0.2
< 5	217	< 5	< 5	< 5	< 5	2.1	< 0.2	< 1	0.8
< 5	104	< 5	< 5	< 5	< 5	0.9	0.2	< 1	< 0.2
< 5	186	< 5	< 5	< 5	< 5	1.6	< 0.2	< 1	1.8

F2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
BB1	a	19970717	< 0.01	0.17	< 0.05	0.06	< 0.001	< 0.001	0.7
BB1	b	19970717	< 0.01	0.1	< 0.05	0.04	< 0.001	< 0.001	0.3
BB1	c	19970717	< 0.01	0.1	< 0.05	0.04	< 0.001	< 0.001	0.3
BB2	a	19970717	< 0.1	< 0.5	< 0.5	0.9	< 0.01	< 0.01	17
BB2	b	19970717	< 0.1	0.6	< 0.5	0.8	< 0.01	< 0.01	18
BB2	c	19970717	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	19
BB4	a	19970717	< 0.1	< 0.5	< 0.5	0.7	0.02	< 0.01	18
BB4	b	19970717	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	20
BB4	c	19970717	< 0.1	< 0.5	< 0.5	0.6	< 0.01	< 0.01	18
BB5	a	19970717	< 0.01	0.09	< 0.05	0.07	< 0.001	< 0.001	0.9
BB5	b	19970717	< 0.01	0.11	< 0.05	0.11	< 0.001	< 0.001	1.1
BB5	c	19970717	< 0.1	< 0.5	< 0.5	0.7	< 0.01	< 0.01	9
BB1	a	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB1	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB1	c	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	< 10
BB2	a	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB2	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB2	c	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB3	a	19970801	< 1	30	< 5	< 1	< 0.1	< 0.1	50
BB3	b	19970801	< 1	32	< 5	< 1	< 0.1	< 0.1	50
BB3	c	19970801	< 1	29	< 5	< 1	< 0.1	< 0.1	50
BB4	a	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
BB4	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
BB4	c	19970801	< 1	7	< 5	< 1	< 0.1	< 0.1	40
BB5	a	19970801	< 1	12	< 5	< 1	< 0.1	< 0.1	20
BB5	b	19970801	< 1	< 5	< 5	< 1	< 0.1	< 0.1	20
BB5	c	19970801	1	12	< 5	< 1	0.1	< 0.1	20
BB1	a	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
BB1	b	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	30
BB1	c	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	40
BB2	a	19970814	< 1	< 5	< 5	< 1	0.2	< 0.1	100
BB2	b	19970814	< 1	< 5	< 5	2	< 0.1	< 0.1	100
BB2	c	19970814	< 1	< 5	< 5	1	< 0.1	< 0.1	120

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.005	< 0.005	0.008	0.01	0.102	1.8	1.5	0.005	< 0.01	35.7	< 0.02	< 0.1
< 0.005	< 0.005	< 0.005	< 0.005	0.057	1.5	0.7	0.002	< 0.01	26	< 0.02	< 0.1
< 0.005	< 0.005	< 0.005	< 0.005	0.041	1.2	0.6	0.002	< 0.01	23.6	< 0.02	< 0.1
< 0.05	< 0.05	0.08	0.11	< 0.05	27	43	< 0.01	< 0.1	538	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	26	44	0.01	< 0.1	562	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	28	47	< 0.01	< 0.1	592	< 0.2	< 1
< 0.05	< 0.05	0.06	0.09	0.14	10	43	0.01	< 0.1	383	< 0.2	< 1
< 0.05	< 0.05	< 0.05	0.08	0.09	18	47	0.01	< 0.1	438	< 0.2	< 1
< 0.05	< 0.05	< 0.05	< 0.05	0.1	16	43	< 0.01	< 0.1	403	< 0.2	< 1
< 0.005	< 0.005	< 0.005	0.011	0.066	1.9	2.2	0.001	< 0.01	28.9	< 0.02	< 0.1
< 0.005	< 0.005	0.023	0.018	0.057	2.7	2.6	0.001	< 0.01	49.1	< 0.02	< 0.1
< 0.05	< 0.05	< 0.05	0.07	0.13	3	25	< 0.01	< 0.1	214	< 0.2	< 1
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	20	< 0.1	< 1	150	< 2	< 10
< 0.5	0.5	0.9	< 0.5	< 0.5	< 10	10	< 0.1	< 1	120	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	10	< 0.1	< 1	110	< 2	< 10
< 0.5	< 0.5	0.5	< 0.5	< 0.5	50	150	< 0.1	< 1	1180	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	0.8	30	140	< 0.1	< 1	1140	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	150	< 0.1	< 1	1180	< 2	< 10
< 0.5	< 0.5	< 0.5	3.4	0.5	< 10	30	0.8	< 1	180	< 2	< 10
< 0.5	< 0.5	< 0.5	2.3	1.6	< 10	40	0.9	< 1	200	< 2	< 10
< 0.5	< 0.5	< 0.5	1.8	< 0.5	< 10	30	0.7	< 1	180	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	40	100	< 0.1	< 1	780	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	0.8	50	100	< 0.1	< 1	800	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	100	0.2	< 1	800	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	20	80	< 0.1	< 1	530	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	20	80	0.2	< 1	520	< 2	< 10
< 0.5	< 0.5	< 0.5	0.7	< 0.5	10	60	< 0.1	< 1	610	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	80	< 0.1	< 1	660	< 2	< 10
< 0.5	< 0.5	1.1	< 0.5	< 0.5	40	80	< 0.1	< 1	660	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	70	< 0.1	< 1	560	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	100	300	< 0.1	< 1	2060	< 2	< 10
< 0.5	1.2	< 0.5	< 0.5	< 0.5	70	280	< 0.1	< 1	2130	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	120	380	< 0.1	< 1	2810	< 2	< 10

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
0.06	3.53	< 0.05	< 0.05	3.07	< 0.05	0.011	0.004	< 0.01	0.023
< 0.05	2.74	< 0.05	< 0.05	3.09	< 0.05	0.005	< 0.002	< 0.01	0.024
< 0.05	2.48	< 0.05	< 0.05	3.07	< 0.05	0.004	< 0.002	< 0.01	0.013
< 0.5	49.9	< 0.5	< 0.5	5.5	< 0.5	0.28	< 0.02	< 0.1	< 0.02
0.6	52.6	< 0.5	< 0.5	5.9	< 0.5	0.29	< 0.02	< 0.1	< 0.02
< 0.5	55.4	< 0.5	< 0.5	5.4	< 0.5	0.31	< 0.02	< 0.1	0.03
< 0.5	38.4	< 0.5	1.1	9.4	< 0.5	0.31	0.06	< 0.1	0.05
< 0.5	43.5	< 0.5	0.5	10.7	< 0.5	0.33	< 0.02	< 0.1	0.05
< 0.5	40.2	< 0.5	< 0.5	9.3	< 0.5	0.3	< 0.02	< 0.1	< 0.02
< 0.05	3.6	< 0.05	< 0.05	4.16	< 0.05	0.014	< 0.002	< 0.01	0.017
< 0.05	5.3	< 0.05	< 0.05	4.16	< 0.05	0.018	< 0.002	< 0.01	0.016
< 0.5	19	< 0.5	< 0.5	4	< 0.5	0.16	< 0.02	< 0.1	0.02
< 5	12	< 5	< 5	5	< 5	0.1	< 0.2	< 1	< 0.2
< 5	11	< 5	< 5	< 5	< 5	< 0.1	< 0.2	< 1	< 0.2
< 5	10	< 5	6	< 5	< 5	< 0.1	< 0.2	< 1	< 0.2
< 5	105	< 5	< 5	< 5	< 5	1	< 0.2	< 1	< 0.2
7	105	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
< 5	107	< 5	< 5	< 5	< 5	0.9	< 0.2	< 1	< 0.2
< 5	139	< 5	< 5	34	< 5	0.4	< 0.2	< 1	1.8
< 5	138	< 5	< 5	33	< 5	0.4	< 0.2	< 1	1.9
< 5	135	< 5	7	33	< 5	0.4	< 0.2	< 1	2
< 5	78	< 5	< 5	10	< 5	0.6	< 0.2	< 1	< 0.2
< 5	82	< 5	< 5	11	< 5	0.6	< 0.2	< 1	< 0.2
< 5	78	< 5	< 5	11	< 5	0.6	< 0.2	< 1	< 0.2
< 5	31	< 5	< 5	6	< 5	0.4	< 0.2	< 1	< 0.2
< 5	33	< 5	< 5	< 5	< 5	0.4	< 0.2	< 1	< 0.2
7	32	9	< 5	5	< 5	0.3	0.4	2	< 0.2
< 5	57	< 5	< 5	< 5	< 5	0.7	< 0.2	< 1	< 0.2
< 5	57	< 5	5	< 5	< 5	0.5	< 0.2	< 1	< 0.2
< 5	49	< 5	< 5	< 5	< 5	0.6	< 0.2	< 1	< 0.2
< 5	177	< 5	< 5	5	< 5	2	< 0.2	< 1	< 0.2
< 5	186	6	< 5	< 5	< 5	1.9	< 0.2	< 1	< 0.2
< 5	243	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	< 0.2

SITE	REPLICATE	DATE	AG	AL	AS	B	BA	BE	CA
BB3	a	19970814	< 1	11	< 5	< 1	< 0.1	< 0.1	50
BB3	b	19970814	< 1	11	< 5	< 1	< 0.1	< 0.1	50
BB3	c	19970814	< 1	11	< 5	< 1	< 0.1	< 0.1	50
BB4	a	19970814	< 1	< 5	< 5	1	< 0.1	< 0.1	50
BB4	b	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB4	c	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	50
BB5	a	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	90
BB5	b	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	110
BB5	c	19970814	< 1	< 5	< 5	< 1	< 0.1	< 0.1	120

CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P
< 0.5	< 0.5	< 0.5	0.6	< 0.5	20	100	0.2	< 1	730	< 2	< 10
< 0.5	0.7	< 0.5	0.7	< 0.5	30	100	0.5	< 1	750	< 2	< 10
< 0.5	< 0.5	1.2	1.2	< 0.5	30	110	0.3	< 1	780	< 2	< 10
< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	50	130	0.1	< 1	1120	< 2	< 10
< 0.5	< 0.5	< 0.5	2.2	< 0.5	50	140	< 0.1	< 1	1100	< 2	< 10
< 0.5	< 0.5	< 0.5	2.1	< 0.5	50	130	< 0.1	< 1	1080	< 2	< 10
0.5	< 0.5	< 0.5	1	1	70	220	< 0.1	< 1	1630	< 2	< 10
< 0.5	< 0.5	1.1	< 0.5	< 0.5	90	280	< 0.1	< 1	2060	< 2	< 10
< 0.5	< 0.5	0.5	< 0.5	< 0.5	80	270	< 0.1	< 1	2020	< 2	< 10

PB	S	SB	SE	SI	SN	SR	TI	V	ZN
< 5	132	< 5	< 5	17	< 5	0.7	< 0.2	< 1	0.7
< 5	141	< 5	< 5	20	< 5	0.7	< 0.2	< 1	0.7
< 5	139	6	< 5	20	< 5	0.8	< 0.2	< 1	0.7
< 5	101	< 5	< 5	7	< 5	0.8	< 0.2	< 1	< 0.2
< 5	99	< 5	< 5	7	< 5	0.9	< 0.2	< 1	< 0.2
< 5	98	< 5	< 5	6	< 5	0.9	< 0.2	< 1	< 0.2
< 5	141	< 5	< 5	< 5	< 5	1.7	< 0.2	< 1	< 0.2
< 5	175	< 5	5	< 5	< 5	2.4	< 0.2	< 1	0.4
< 5	168	< 5	< 5	< 5	< 5	2.5	< 0.2	< 1	< 0.2

Table 8. Analyses of surface water samples using ICP-AES and GF-AAS from 1998 fish cage sites ($mg \cdot L^{-1}$).

SITE	DATE	ANALYSIS	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE
F1	19980513	ICP-AES	<1	<5	<5	<1	<0.1	<0.1	30	<0.5	<0.5	<0.5	<0.5	0.6
F1	19980513	GF-AAS											0.01	
F2	19980513	ICP-AES	<1	<5	<5	<1	<0.1	<0.1	10	<0.5	<0.5	<0.5	0.6	0.8
F2	19980513	GF-AAS											1.2	
F1	19980520	ICP-AES	<1	<5	<5	<1	<0.1	<0.1	100	<0.5	<0.5	<0.5	<0.5	<0.5
F1	19980520	GF-AAS											0.01	
F2	19980520	ICP-AES	<1	<5	<5	<1	<0.1	<0.1	100	<0.5	<0.5	<0.5	<0.5	<0.5
F2	19980520	GF-AAS											0.1	

K	MG	MN	MO	NA	NI	P	PB	S	SB	SE	SI	SN	SR	TI	V	ZN
30	100	<0.1	<1	840	<2	<10	<5	67	<5	<5	<5	<5	0.5	<0.2	<1	<0.2
<10	30	0.2	<1	270	<2	<10	<5	29	<5	<5	<5	<5	0.1	<0.2	<1	0.9
80	300	<0.1	<1	2480	<2	<10	<5	197	<5	<5	<5	<5	1.8	<0.2	<1	<0.2
90	310	<0.1	<1	2470	<2	<10	<5	198	<5	<5	<5	<5	1.8	<0.2	<1	<0.2

Table 9. Analyses of surface water samples using ICP-AES from 1998 mussel cage sites ($mg \cdot L^{-1}$).

SITE	DATE	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE
M1	19980429	<1	<5	<5	3	<0.1	<0.1	290	<0.5	<0.5	<0.5	<0.5	<0.5
M2	19980429	<1	<5	<5	3	0.4	<0.1	300	<0.5	<0.5	<0.5	<0.5	<0.5
M3	19980429	<1	<5	<5	3	<0.1	<0.1	290	<0.5	<0.5	0.9	<0.5	<0.5
M4	19980429	<1	<5	<5	2	<0.1	<0.1	200	<0.5	<0.5	<0.5	<0.5	<0.5
M5	19980429	<1	<5	<5	3	<0.1	<0.1	240	<0.5	<0.5	<0.5	<0.5	1.5
M6	19980429	<1	<5	<5	4	<0.1	<0.1	290	<0.5	<0.5	<0.5	<0.5	2.2
M7	19980429	<1	<5	<5	1	<0.1	<0.1	90	<0.5	<0.5	<0.5	<0.5	2.5
M8	19980429	<1	<5	<5	3	<0.1	<0.1	260	<0.5	<0.5	<0.5	<0.5	1.3
M9	19980429	<1	<5	<5	4	<0.1	<0.1	310	<0.5	<0.5	<0.5	<0.5	1.7
M10	19980429	<1	<5	<5	4	<0.1	<0.1	320	<0.5	0.6	<0.5	<0.5	1.3
M11	19980429	<1	<5	<5	4	<0.1	<0.1	310	<0.5	0.7	<0.5	<0.5	1.1
M12	19980429	<1	<5	<5	2	<0.1	<0.1	190	<0.5	<0.5	<0.5	<0.5	1.4
M13	19980429	<1	<5	<5	2	<0.1	<0.1	140	<0.5	<0.5	<0.5	<0.5	0.9
M14	19980429	<1	<5	<5	2	<0.1	<0.1	160	<0.5	<0.5	<0.5	<0.5	<0.5
M15	19980429	<1	<5	<5	2	0.4	<0.1	230	<0.5	<0.5	<0.5	<0.5	<0.5
M1	19980515	<1	<5	<5	<1	<0.1	<0.1	60	<0.5	<0.5	<0.5	<0.5	<0.5
M2	19980515	<1	<5	<5	<1	<0.1	<0.1	50	<0.5	<0.5	<0.5	<0.5	0.6
M3	19980515	<1	<5	<5	<1	<0.1	<0.1	30	<0.5	<0.5	<0.5	<0.5	<0.5
M4	19980515	<1	<5	<5	<1	<0.1	<0.1	20	<0.5	<0.5	<0.5	<0.5	<0.5
M5	19980515	<1	<5	<5	<1	<0.1	<0.1	20	<0.5	<0.5	<0.5	<0.5	<0.5
M6	19980515	<1	<5	<5	<1	<0.1	<0.1	40	<0.5	<0.5	<0.5	<0.5	6
M7	19980515	<1	<5	<5	<1	<0.1	<0.1	30	<0.5	<0.5	<0.5	0.9	4.9
M8	19980515	<1	<5	<5	<1	<0.1	<0.1	40	<0.5	<0.5	<0.5	<0.5	4.5
M9	19980515	<1	<5	<5	<1	<0.1	<0.1	40	<0.5	<0.5	<0.5	<0.5	3.7
M10	19980515	<1	<5	<5	<1	<0.1	<0.1	50	<0.5	<0.5	<0.5	<0.5	3.7
M11	19980515	<1	<5	<5	<1	0.1	<0.1	50	<0.5	<0.5	0.5	0.7	3
M12	19980515	<1	<5	<5	<1	<0.1	<0.1	70	<0.5	<0.5	<0.5	<0.5	3.6
M13	19980515	<1	<5	<5	<1	0.3	<0.1	20	<0.5	<0.5	<0.5	<0.5	3.6
M14	19980515	<1	<5	<5	<1	<0.1	<0.1	60	<0.5	<0.5	1.4	<0.5	1.9
M1	19980528	<1	<5	<5	<1	<0.1	<0.1	100	<0.5	<0.5	<0.5	<0.5	2
M2	19980528	<1	<5	<5	<1	<0.1	<0.1	90	<0.5	<0.5	1.6	<0.5	1.4
M3	19980528	<1	<5	<5	<1	<0.1	<0.1	60	<0.5	<0.5	<0.5	<0.5	0.7
M4	19980528	<1	<5	<5	<1	<0.1	<0.1	60	<0.5	<0.5	1.4	<0.5	<0.5
M5	19980528	<1	<5	<5	1	<0.1	<0.1	60	<0.5	<0.5	0.6	<0.5	<0.5
M6	19980528	<1	<5	<5	<1	<0.1	<0.1	50	<0.5	<0.5	<0.5	<0.5	<0.5
M7	19980528	<1	<5	<5	<1	<0.1	<0.1	20	<0.5	<0.5	<0.5	0.9	<0.5
M8	19980528	<1	<5	<5	<1	0.1	<0.1	60	<0.5	<0.5	1	0.7	<0.5
M9	19980528	<1	<5	<5	<1	<0.1	<0.1	40	<0.5	<0.5	<0.5	<0.5	<0.5
M10	19980528	<1	<5	<5	<1	<0.1	<0.1	20	<0.5	<0.5	<0.5	<0.5	<0.5
M11	19980528	<1	<5	<5	<1	<0.1	<0.1	70	<0.5	<0.5	0.7	<0.5	0.5
M13	19980528	<1	<5	<5	<1	0.1	<0.1	20	<0.5	<0.5	0.7	<0.5	<0.5
M14	19980528	<1	<5	<5	<1	<0.1	<0.1	60	<0.5	<0.5	<0.5	<0.5	<0.5
M15	19980528	<1	<5	<5	<1	<0.1	<0.1	60	<0.5	<0.5	<0.5	<0.5	<0.5
M1	19980608	<1	<5	<5	<1	<0.1	<0.1	70	<0.5	0.7	0.9	<0.5	<0.5
M2	19980608	<1	<5	<5	<1	<0.1	<0.1	50	<0.5	<0.5	0.7	<0.5	<0.5
M3	19980608	<1	<5	<5	<1	<0.1	<0.1	40	<0.5	<0.5	<0.5	<0.5	<0.5
M4	19980608	<1	<5	<5	<1	<0.1	<0.1	60	<0.5	<0.5	<0.5	<0.5	<0.5
M5	19980608	<1	<5	<5	<1	<0.1	<0.1	30	<0.5	<0.5	<0.5	<0.5	0.6
M6	19980608	<1	<5	<5	<1	<0.1	<0.1	40	<0.5	<0.5	0.7	<0.5	<0.5
M7	19980608	<1	<5	<5	<1	0.1	<0.1	20	<0.5	<0.5	0.8	0.7	<0.5
M8	19980608	<1	<5	<5	<1	0.3	<0.1	40	<0.5	<0.5	<0.5	<0.5	<0.5
M9	19980608	<1	<5	<5	<1	<0.1	<0.1	30	<0.5	<0.5	<0.5	<0.5	<0.5
M10	19980608	<1	<5	<5	<1	<0.1	<0.1	30	<0.5	<0.5	<0.5	<0.5	<0.5
M11	19980608	<1	<5	<5	<1	<0.1	<0.1	60	<0.5	<0.5	<0.5	<0.5	<0.5
M12	19980608	<1	<5	<5	<1	<0.1	<0.1	80	<0.5	<0.5	<0.5	<0.5	<0.5
M13	19980608	<1	<5	<5	<1	<0.1	<0.1	30	<0.5	<0.5	<0.5	<0.5	<0.5

K	MG	MN	MO	NA	NI	P	PB	S	SB	SE	SI	SN	SR	TI	V	ZN
280	930	<0.1	<1	7670	<2	<10	<5	608	<5	<5	<5	<5	5.5	<0.2	<1	<0.2
290	940	<0.1	<1	7720	<2	<10	<5	615	<5	<5	<5	<5	5.6	<0.2	<1	<0.2
300	930	<0.1	<1	7610	<2	<10	<5	601	<5	<5	<5	<5	5.6	<0.2	<1	<0.2
190	630	<0.1	<1	5090	<2	<10	<5	409	<5	<5	<5	<5	3.7	<0.2	<1	<0.2
240	760	0.3	<1	6210	<2	<10	<5	497	<5	<5	<5	<5	4.6	<0.2	<1	<0.2
300	910	0.4	<1	7410	<2	<10	<5	589	<5	<5	<5	<5	5.5	<0.2	<1	<0.2
90	270	0.3	<1	2190	<2	<10	<5	182	<5	<5	<5	<5	1.6	<0.2	<1	0.6
250	820	<0.1	<1	6750	<2	<10	<5	540	<5	<5	<5	<5	4.9	<0.2	<1	<0.2
310	970	<0.1	<1	8020	<2	<10	<5	632	<5	<5	<5	<5	5.8	<0.2	<1	<0.2
320	1020	0.2	<1	8410	<2	<10	<5	659	<5	<5	<5	<5	6.1	<0.2	<1	<0.2
310	990	<0.1	<1	8110	<2	<10	<5	640	<5	<5	<5	<5	5.9	<0.2	<1	<0.2
190	600	<0.1	<1	4880	<2	<10	<5	389	<5	<5	<5	<5	3.6	<0.2	<1	<0.2
140	460	0.2	<1	3690	<2	<10	<5	297	<5	<5	<5	<5	2.7	<0.2	<1	<0.2
150	520	0.1	<1	4200	<2	<10	<5	335	<5	<5	<5	<5	3.1	<0.2	<1	<0.2
230	740	<0.1	<1	6010	<2	<10	<5	476	<5	<5	<5	<5	4.3	<0.2	<1	<0.2
50	200	<0.1	<1	1590	<2	<10	<5	129	6	<5	<5	<5	1.2	<0.2	<1	<0.2
30	140	<0.1	<1	1120	<2	<10	<5	90	<5	<5	<5	<5	0.8	<0.2	<1	<0.2
30	90	<0.1	<1	790	<2	<10	<5	61	<5	<5	<5	<5	0.5	<0.2	<1	<0.2
20	70	0.1	<1	580	<2	<10	<5	46	<5	<5	<5	<5	0.5	<0.2	<1	<0.2
20	70	<0.1	<1	500	<2	<10	<5	39	<5	<5	<5	<5	0.5	<0.2	<1	<0.2
30	130	<0.1	<1	1010	<2	<10	<5	80	<5	<5	<5	<5	0.7	<0.2	<1	<0.2
20	80	<0.1	<1	610	<2	<10	<5	52	<5	<5	<5	<5	0.5	<0.2	<1	<0.2
20	110	<0.1	<1	890	<2	<10	<5	70	<5	<5	<5	<5	0.6	<0.2	<1	<0.2
30	110	<0.1	<1	880	<2	<10	<5	69	<5	<5	<5	<5	0.7	<0.2	<1	<0.2
30	140	<0.1	<1	1150	<2	<10	<5	91	<5	<5	<5	<5	0.8	<0.2	<1	<0.2
40	150	<0.1	<1	1140	<2	<10	<5	91	<5	<5	<5	<5	0.9	<0.2	<1	<0.2
60	220	<0.1	<1	1680	<2	<10	<5	134	<5	<5	<5	<5	1.2	<0.2	<1	<0.2
10	40	<0.1	<1	350	<2	<10	<5	26	<5	<5	<5	<5	0.3	<0.2	<1	<0.2
50	190	<0.1	<1	1510	<2	<10	<5	121	<5	<5	<5	<5	1.1	<0.2	<1	<0.2
100	330	<0.1	<1	2610	<2	<10	<5	207	<5	<5	<5	<5	2.1	<0.2	<1	<0.2
90	280	<0.1	<1	2190	<2	<10	<5	173	<5	<5	<5	<5	1.7	<0.2	<1	<0.2
50	180	<0.1	<1	1390	<2	<10	<5	111	<5	<5	<5	<5	1	<0.2	<1	<0.2
50	180	<0.1	<1	1370	<2	<10	<5	109	<5	<5	<5	<5	1.1	<0.2	<1	<0.2
60	200	<0.1	<1	1550	<2	<10	<5	124	<5	<5	<5	<5	1.2	<0.2	<1	0.3
50	160	<0.1	<1	1300	<2	<10	<5	104	<5	<5	<5	<5	0.9	<0.2	<1	<0.2
20	60	<0.1	<1	440	<2	<10	<5	41	<5	<5	<5	<5	0.3	<0.2	<1	0.7
60	170	0.1	<1	1320	<2	<10	<5	107	<5	<5	<5	<5	1	<0.2	<1	0.4
30	120	<0.1	<1	1000	<2	<10	<5	82	<5	<5	<5	<5	0.7	<0.2	<1	<0.2
20	70	<0.1	<1	560	<2	<10	<5	45	<5	<5	<5	<5	0.4	<0.2	<1	<0.2
80	220	<0.1	<1	1700	<2	<10	<5	137	<5	<5	<5	<5	1.3	<0.2	<1	<0.2
20	60	<0.1	<1	420	<2	<10	<5	33	<5	<5	<5	<5	0.4	<0.2	<1	<0.2
50	180	<0.1	<1	1450	<2	<10	<5	116	<5	<5	<5	<5	1.1	<0.2	<1	0.3
60	190	<0.1	<1	1550	<2	<10	<5	124	<5	<5	<5	<5	1.2	<0.2	<1	0.3
80	230	<0.1	<1	1740	<2	<10	<5	141	<5	<5	<5	<5	1.4	0.5	<1	<0.2
50	150	<0.1	<1	1210	<2	<10	<5	99	<5	<5	<5	<5	0.9	<0.2	<1	<0.2
50	140	<0.1	<1	1070	<2	<10	<5	87	<5	<5	<5	<5	0.9	0.3	<1	<0.2
50	180	<0.1	<1	1420	<2	<10	<5	116	<5	<5	<5	<5	1.1	<0.2	<1	<0.2
30	110	<0.1	<1	840	<2	<10	<5	70	<5	<5	<5	<5	0.7	<0.2	<1	<0.2
40	120	<0.1	<1	900	<2	<10	<5	74	<5	<5	<5	<5	0.7	<0.2	<1	<0.2
10	40	<0.1	<1	290	<2	<10	<5	31	<5	<5	<5	<5	0.3	0.3	<1	<0.2
30	130	<0.1	<1	1030	<2	<10	<5	85	<5	<5	<5	<5	0.8	<0.2	<1	<0.2
30	100	<0.1	<1	810	<2	<10	<5	67	<5	<5	<5	<5	0.6	<0.2	<1	<0.2
30	100	<0.1	<1	790	<2	<10	<5	64	<5	<5	<5	<5	0.6	<0.2	<1	<0.2
50	190	<0.1	<1	1550	<2	<10	<5	123	<5	<5	<5	<5	1.1	<0.2	<1	<0.2
80	260	<0.1	<1	2030	<2	<10	<5	161	<5	<5	<5	<5	1.5	<0.2	<1	<0.2
30	110	<0.1	<1	850	<2	<10	<5	67	<5	<5	<5	<5	0.7	<0.2	<1	<0.2

SITE	DATE	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE
M14	19980608	<1	<5	<5	<1	<0.1	<0.1	90	<0.5	<0.5	<0.5	<0.5	<0.5
M15	19980608	<1	<5	<5	<1	<0.1	<0.1	90	<0.5	<0.5	<0.5	<0.5	<0.5

K	MG	MN	MO	NA	NI	P	PB	S	SB	SE	SI	SN	SR	TI	V	ZN
80	290	<0.1	<1	2250	<2	<10	<5	160	<5	<5	<5	<5	1.7	<0.2	<1	<0.2
90	270	<0.1	<1	2130	<2	<10	<5	167	<5	<5	<5	<5	1.7	<0.2	<1	<0.2

Appendix 1. Dissolved metal (ICP-AES) detection limits (see Appendix 1c for explanation of code).

SITE	DATE	DETECTION CODE SURFACE	DETECTION CODE INTERSTITIAL
a) 1997 beach seine sites (mg L^{-1})			
FC1	19970421	25	
FC2	19970421	50	
FC3	19970421	0	
FC4	19970421	10	
FC5	19970421	50	
FC6	19970421	100	
SC1	19970422	0	
SC2	19970422	0	
SC3	19970422	10	
SC4	19970422	25	
SC5	19970422	10	
BB1	19970424	100	100
BB2	19970424	100	100
BB3	19970424	100	100
BB4	19970424	100	100
BB5	19970424	100	100
DI1	19970425	25	25
DI2	19970425	25	25
DI3	19970425	50	50
DI4	19970425	10	25
DI5	19970425	25	25
WF1	19970430	100	100
FC1	19970505	100	100
FC2	19970505	100	100
FC3	19970505	100	
FC4	19970505	100	100
FC5	19970505	100	100
FC6	19970505	100	100
BB1	19970506	100	100
BB2	19970506	100	100
BB3	19970506	100	100
BB4	19970506	100	100
BB5	19970506	100	100

SITE	DATE	DETECTION CODE	
		SURFACE	INTERSTITIAL
DI1	19970507	100	100
DI2	19970507	100	100
DI3	19970507	100	100
DI4	19970507	100	100
DI5	19970507	100	100
SC1	19970508	100	100
SC2	19970508	100	100
SC3	19970508	100	100
SC4	19970508	100	100
SC5	19970508	100	100
SC6	19970508	100	100
WF1	19970509	100	100
FC1	19970520	100	100
FC2	19970520	100	
FC3	19970520	100	
FC4	19970520	100	100
FC5	19970520	100	100
FC6	19970520	100	100
BB1	19970521	100	100
BB2	19970521	100	100
BB3	19970521	100	100
BB4	19970521	100	100
BB5	19970521	100	100
SC1	19970523	100	100
SC2	19970523	100	100
SC3	19970523	100	100
WF1	19970526	100	100
DI1	19970527	100	100
DI2	19970527	100	100
DI3	19970527	100	100
DI4	19970527	100	100
DI5	19970527	100	100
FC1	19970604	10	10
FC2	19970604	10	10
FC3	19970604	10	10
FC4	19970604	10	10

SITE	DATE	DETECTION CODE	
		SURFACE	INTERSTITIAL
FC5	19970604	10	10
FC6	19970604	10	10
BB1	19970605	10	10
BB2	19970605	10	10
BB3	19970605	100	10
BB4	19970605	10	10
BB5	19970605	10	10
DI1	19970606	100	100
DI2	19970606	100	0.5
DI3	19970606	100	0.5
DI4	19970606	100	0.5
DI5	19970606	100	0.5
BB1	19970620	10	10
BB2	19970620	10	10
BB3	19970620	10	10
BB4	19970620	10	10
BB5	19970620	100	10
BB1	19970704	100	100
BB2	19970704	100	100
BB3	19970704	100	100
BB4	19970704	100	100
BB5	19970704	100	100
BB1	19970717	10	0
BB2	19970717	10	10
BB3	19970717	100	
BB4	19970717	100	10
BB5	19970717	100	0
BB1	19970801	100	100
BB2	19970801	100	100
BB3	19970801	100	100
BB4	19970801	100	100
BB5	19970801	100	100
BB1	19970814	100	100
BB2	19970814	100	100
BB3	19970814	100	100
BB4	19970814	100	100
BB5	19970814	100	100

SITE	DATE	DETECTION CODE SURFACE	INTERSTITIAL
b) 1998 mussel sites			
M1	19980429	100	
M2	19980429	100	
M3	19980429	100	
M4	19980429	100	
M5	19980429	100	
M6	19980429	100	
M7	19980429	100	
M8	19980429	100	
M9	19980429	100	
M10	19980429	100	
M11	19980429	100	
M12	19980429	100	
M13	19980429	100	
M14	19980429	100	
M15	19980429	100	
M1	19980515	100	
M2	19980515	100	
M3	19980515	100	
M4	19980515	100	
M5	19980515	100	
M6	19980515	100	
M7	19980515	100	
M8	19980515	100	
M9	19980515	100	
M10	19980515	100	
M11	19980515	100	
M12	19980515	100	
M13	19980515	100	
M14	19980515	100	
M15	19980515		
M1	19980528	100	
M2	19980528	100	
M3	19980528	100	
M4	19980528	100	
M5	19980528	100	
M6	19980528	100	
M7	19980528	100	
M8	19980528	100	
M9	19980528	100	
M10	19980528	100	

SITE	DATE	DETECTION CODE	
		SURFACE	INTERSTITIAL
M11	19980528	100	
M12	19980528		
M13	19980528	100	
M14	19980528	100	
M15	19980528	100	
M1	19980608	100	
M2	19980608	100	
M3	19980608	100	
M4	19980608	100	
M5	19980608	100	
M6	19980608	100	
M7	19980608	100	
M8	19980608	100	
M9	19980608	100	
M10	19980608	100	
M11	19980608	100	
M12	19980608	100	
M13	19980608	100	
M14	19980608	100	
M15	19980608	100	

Appendix 1 (continued).

c) explanation of dilution code

DILUTION CODE	DETECTION LIMITS ($mg\ L^{-1}$) AG	AL	CD	CO	CR	CU	FE	MN	MO	NI
0	0.01	0.05	0.005	0.005	0.005	0.005	0.005	0.001	0.01	0.02
10	0.1	0.5	0.05	0.05	0.05	0.05	0.05	0.01	0.1	0.2
25	0.3	1	0.1	0.1	0.1	0.1	0.1	0.03	0.3	0.5
50	0.5	3	0.3	0.3	0.3	0.3	0.3	0.05	0.5	1
100	1	5	0.5	0.5	0.5	0.5	0.5	0.1	1	2

PB	SB	SN	TI	V	ZN
0.05	0.05	0.05	0.002	0.01	0.002
0.5	0.5	0.5	0.02	0.1	0.02
1	1	1	0.05	0.3	0.05
3	3	3	0.1	0.5	0.1
5	5	5	0.2	1	0.2